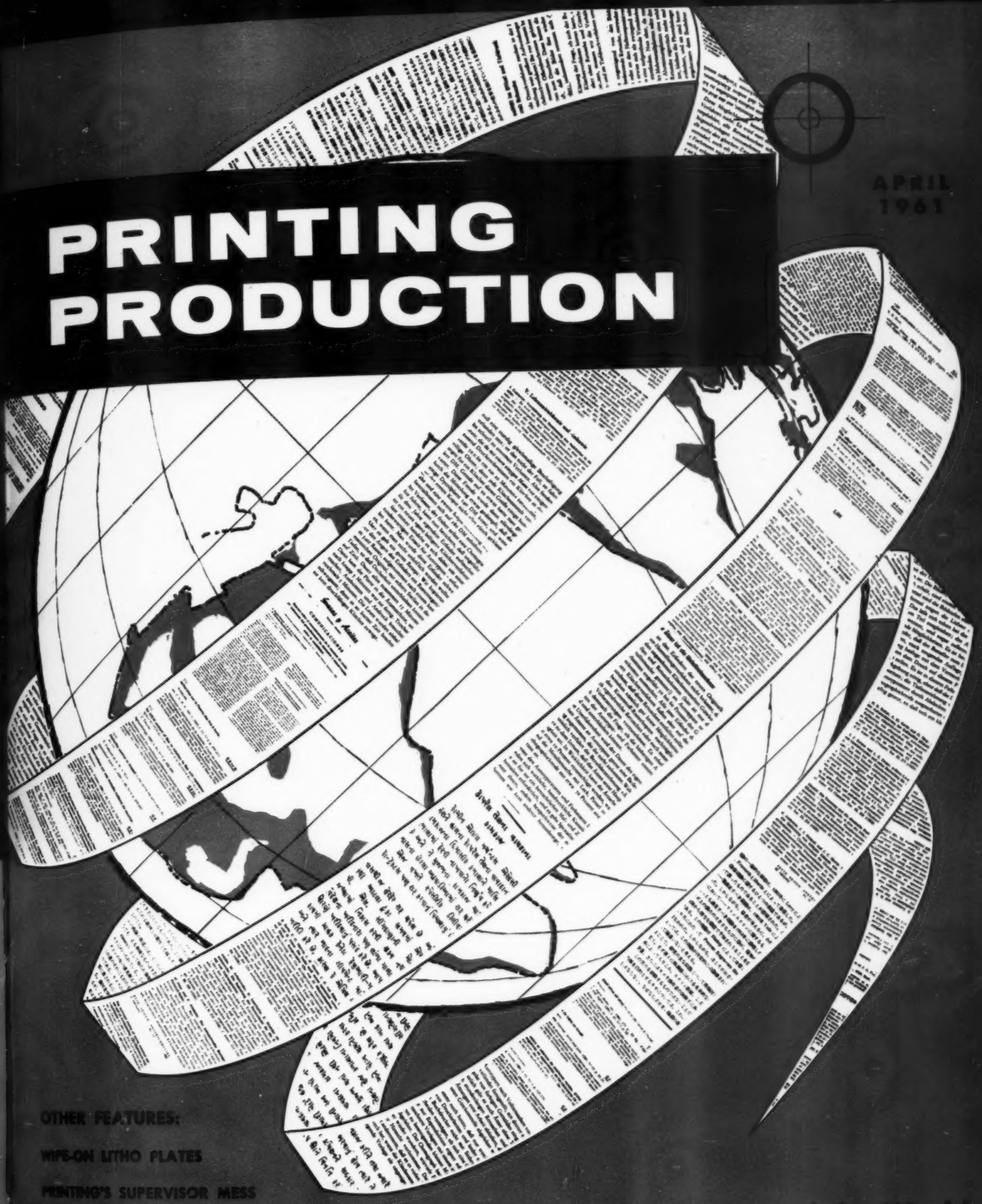
PRINTING PRODUCTION

APRIL 1961



OTHER FEATURES:

WIPE-ON LITHO PLATES

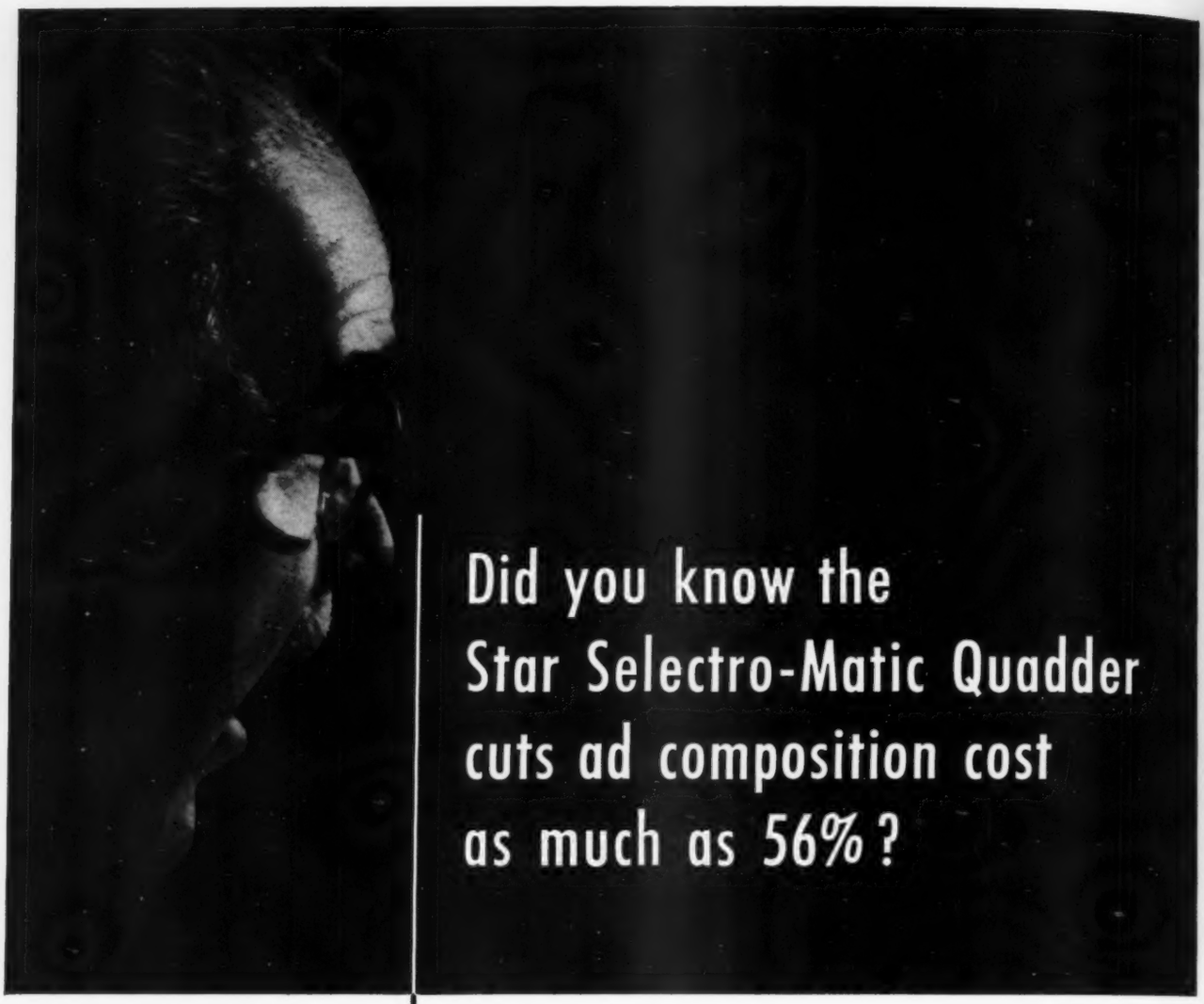
PRINTING'S SUPERVISOR MESS

EQUIPMENT LEASING AS A GROWTH STIMULANT

REPORTS ON NEWSPAPER CONFERENCES

The Printers of the World

THE PRODUCTION MAGAZINE FOR PRINTERS AND LITHOGRAPHERS



Did you know the Star Selectro-Matic Quadder cuts ad composition cost as much as 56%?

It will pay you to investigate the Star Selectro-Matic Quadder. Get the complete story. Write for further information today.

A Star Selectro-Matic Quadder on your slug casting machine can make the difference between profit and loss – between getting a job or losing it. In the newspaper field, it can help you accept late ads that otherwise could not be handled. News heads, TV listings, classified, and display ad guts are set faster with less operator effort.

In a shop handling specialty work, the savings increase because of the higher proportion of "white space" composition. It is a fact that any machine equipped with a Star Selectro-Matic Quadder can improve production as much as 56%, usually paying for the Quadder completely within a year.

The Star Selectro-Matic Quadder can help you to a greater return on investment without the addition of capital equipment.

Precision TRADE★MARK Parts ®

STAR PARTS, Inc.

SOUTH HACKENSACK, N. J.

BRANCH: 1327 BROADWAY, KANSAS CITY, MO. **AGENCIES:** CHICAGO • MINNEAPOLIS • LOS ANGELES • DENVER SO. ACTON, MASS. • STAR PARTS (LINECASTING) CANADA LTD. MONTREAL AND AGENTS OVERSEAS

For More Information Circle 188 on Reader Service Card

These are the features that CUSTOMERS PRAISE in the STA-HI TWIN-PLATE ROUTER

- **SAFETY-STOP BRAKE** on spindles
- **COMPRESSED AIR-DRIVEN QUILLS** for easy operation
- **AUTOMATIC LUBRICATION SYSTEM**
- **MICROMETER HANDWHEEL** for setting depth of routing cut
- **PERFECTED GLARE-PROOF LIGHTING**
- **VARIABLE SPEED HYDRAULIC TRANSMISSION** for "Stripping"
- **AIR JET CHIP REMOVER**
- **"PRESS TYPE" CAM LOCKUP** for fast plate loading and unloading
- **PLATE REGISTER** checking system
- Adjustable, **ATTACHED SEAT** for Operator comfort
- **"DASHBOARD"** Instrument Controls
- **PRECISION TWIN ROUTER HEADS** Machined from aluminum
- **RUNNING TIME METER** to schedule proper preventive maintenance

STA-HI CORPORATION

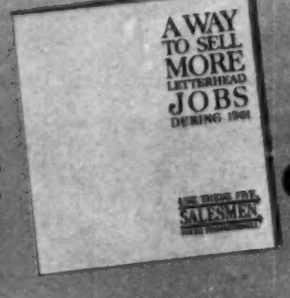
For More Information Circle 187 on Reader Service Card

Put these new H
to work selling more le

COLORFUL ADS IN LEADING MAGAZINES WILL PROMOTE NEW LETTERHEAD DESIGNS AND YOU THROUGHOUT 1961

FREE MAILERS (3½″ x 6″) WILL HELP YOU SELL YOUR PRINTING SERVICE, BRING BUSINESS TO YOU

FREE EASEL DISPLAY CARD (11″ x 14″) INVITES CUSTOMERS TO SEE YOU FOR THEIR NEW LETTERHEAD DESIGNS



Get this free kit of profit-builde

Hammermill salesmen letterhead jobs for you

FREE NEWSPAPER AD MATS WILL HELP YOU SECURE PROFITABLE INQUIRIES FROM LETTERHEAD BUYERS

FREE LETTERHEAD DESIGN BOOK (8½" x 11") PACKED WITH IDEAS: WILL HELP YOU SELL AND SATISFY EVERY CUSTOMER

FREE ORNAMENT IDEA FOLDER WILL HELP YOU CREATE UNIQUE SPOT ILLUSTRATIONS FROM YOUR OWN TYPE CASE

from your Hammermill Paper Salesman NOW!

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JUST A LITTLE EXTRA

. . . Through 72 holes of any golf tournament the lead c
change hands a dozen times. At the finish, often a sing
stroke separates the big money winner from second place. A putt that rimmed the cup . . . an approach that
caught the edge of a trap . . . even a 280-yard drive that landed an inch off the fairway often makes the differe

In sports, in business, in life itself, *so little difference* separates the really successful from those who just
being outstanding.

Consider the more successful Production Management Men in the Printing Industry. Frequently it's
little extra practical knowledge that makes them outstanding. Most of these men read this magazine
They know it provides sound ideas because it is the *only* publication edited specifically for th

PRINTIN
PRODUCTIO
Magazine

APRIL 1961
VOL. 91, NO. 7

PRINTING PRODUCTION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

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THE COVER for April has been designed to show the increasing importance of printing on a world-wide basis. In the story on page 46, *The Printers of the World*, France's Victor Letouzey discusses the present importance, past achievements and future of the printing industry. Using Letouzey's theme, Artist Tony Dennison has positioned the globe to show the countries of Africa and Asia where printing is still a young industry. The people in many of the countries on these continents seek the web of printing to satisfy their hunger for knowledge and to improve their standard of living.

LETTERS
TO THE EDITORS

Good Copy Advocates

In the February 1961 issue of PRINTING PRODUCTION there appears an article by Frank DeWitt, entitled *Typesetting Takes Too Much Time*.

The article is very interesting and covers a subject that is foremost in the minds of most printers today—furnishing Linotype operators good copy. To quote DeWitt, "There is a simple, comparatively inexpensive way of producing perfect copy . . . Equipment is readily available for the copy preparation part of the system." Would it be possible for you to tell us what this equipment consists of and from whom it is available?

We have found in your publication considerable information and facts that have been very helpful in the past. Your good work is appreciated.

George C. Rogge
Linotype Division Foreman
Callaghan & Company
Chicago, Ill.

I found the feature by Frank DeWitt (*Typesetting Takes Too Much Time*) in your February magazine to be very challenging. I would like permission to reprint the article in *Advertising Requirements*.

Robert B. Konikow
Managing Editor
Advertising Requirements
Chicago, Ill.

Educators Comment on Carnegie Tech's Actions

We have been pursuing with interest your recent comments about the new Carnegie Tech printing program. I personally feel that it is a matter that can be answered only by the passage of time. It seems that Carnegie's objectives differ greatly from ours at the Southwest School of Printing. However, our regional requirements differ also. In our program, we require a minimum of 20 hrs. per week in the mechanical course. The hourly breakdown in classroom and laboratory is one to four, respectively.

Robert L. Gleason, Director
Southwest School of Printing
Huntsville, Tex.

I read with great interest the editorial entitled *Pay Attention to Your Printing Schools*, which appeared in the November 1960 issue of your magazine. I feel that this new policy on the part of Carnegie Tech and other schools is regrettable. However, I believe that such action has placed the Printing Engineering Dept. of California State Polytechnic College pretty close to the top of the pile. We offer the kind of program which your article seemed to favor for training young men to assume positions as engineers and production men in the printing industry.

I feel that it is the duty of colleges to train young men who can be readily accepted by industry. Enthusiasm for our program is indicated by the number of repeat requests for Cal Poly trained printing engineers.

At the present, we have 125 students enrolled and a staff of seven highly trained and skilled instructors. We are in the process of erecting a new Graphic Arts building which will have over 40,000 sq. ft. devoted to printing engineering. Equipment with a value of more than $625 thousand will be provided.

A. M. (Bert) Fellows
Director of Printing
California State Polytechnic College
San Luis Obispo, Calif.

In your February issue, you question the need for "design, calligraphy and drawing" in (Carnegie Institute of Technology) printing management education. You say "most business men we know are not prepared to accept this version of employment preparedness."

That criticism reflects a feeling sometimes encountered during my many years of plant experience in the attitudes of seasoned plant technicians toward the impact of design controls on their routine activities. Having little understanding and less faith in "design and calligraphy" and no facility in "drawing" these otherwise skilled craftsmen are often antagonistic toward the sources of the creative character of their products.

Whether such design controls originate in the creative departments of their own organization or in advertising agencies, "the dam artist" or "hophead typographer" may be more cursed than understood. Unfortunately, that attitude may also prevail in the front office.

Trends in engineering education are summarized in the report of a recent meeting of the American Assn. for the Advancement of Science (New York *Times*, Feb. 19, 1961). Stressed in the report is the need for a broader curriculum for the "new" engineer.

It is stated that "there must be in the engineer's mind a deep knowledge of human and social needs, of *design and planning*" (italics are mine), "of economics and the emergence of the future . . . The engineer is concerned with means as well as use and purpose; with ideas of design, cost and reliability that are largely alien to the scientist."

From the beginning of printing at Carnegie, in which this writer shared, it was recognized that the esthetics of the Graphic Arts are essential in the training of competent executives. The "new dimensions" at Carnegie are well balanced.

Harry L. Gage, Educational Advisor
National Printing Equipment Assn.
New York, N.Y.

Remembers Chris Chataway

I read with interest PRINTING PRODUCTION's ad on page 4 of the February issue. I fear that you made a rather unfortunate choice of personalities in your copy because Chris Chataway is far from being a non-entity as you imply. Since his retirement from active athletics, Chataway has enjoyed ever-increasing stature.

Recently, he left a promising career as a news correspondent with the Independent Television Authority to enter politics and was elected a member of Parliament for Lewisham North. In February of this year, Chataway was appointed Parliamentary private secretary to Richard Wood, Minister of Power.

"One of the Few"

Reader Miscellany

In the February issue of PRINTING PRODUCTION, you ran a photograph of the conveyor system at the New Haven (Conn.) *Register*. It was stated in the caption that the system was designed and built by Wiretyer Corporation. Instead, it should have been noted that the system was designed by Lockwood Greene Engineers, Inc., and built by Wiretyer.

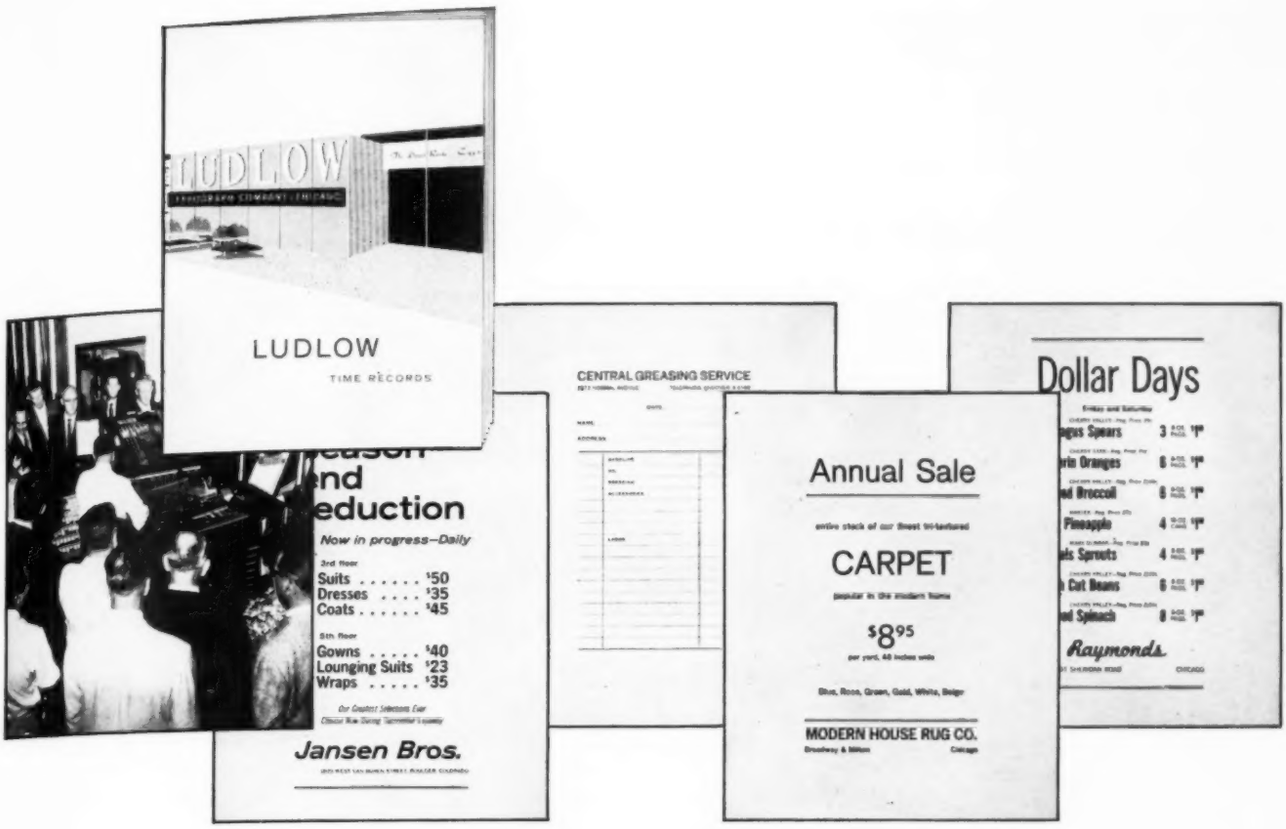
Lora MacDonald
Lockwood Greene Engineers, Inc.
New York, N. Y.

I anxiously await each month for PRINTING PRODUCTION's Idea File and have gained several good ideas from this section of your magazine.

Sterling Stevens, Plant Foreman
Flat River (Mo.) *Daily Journal*

In the February issue of your magazine, there is a very good article entitled *Can Your Men Recognize Roller Troubles on the Press?* Is it possible to obtain five to 10 copies of this article? We are conducting an education program for our pressmen and assistant pressmen and feel that articles such as this one can help our men very much.

Rudy Sironen, Manager
American Color Process Co.
Cleveland, O.



Ludlow Time Records . . .

Close-up of one of the instructive Ludlow public demonstrations

During the 1959 Educational Graphic Arts Exposition in New York the Ludlow Company conducted public demonstrations of display and job composition, so that one could see for himself the time-saving in doing work the Ludlow way.

Exposition visitors were invited to estimate the time actually required to set and make up each job from reprint copy, using both single types and the Ludlow. The job was then set on the Ludlow and made up as a public demonstration of its use for the work in hand. Men respected in the printing industry served as judges at these demonstrations.

These jobs have been included in a new 24-page booklet entitled "Ludlow Time Records," illustrated above. Actual time required is given for setting, casting and make-up on the Ludlow, as well as a detailed description of how each job was produced. Distinctive Ludlow advantages for the setting of the jobs are thoroughly explained.

Send today for your free copy of this valuable new 24-page booklet. It will show you how Ludlow helps improve composing room efficiency.

LUDLOW TYPOGRAPH COMPANY 2032 Clybourn Avenue, Chicago 14, Illinois

For More Information Circle 118 on Reader Service Card

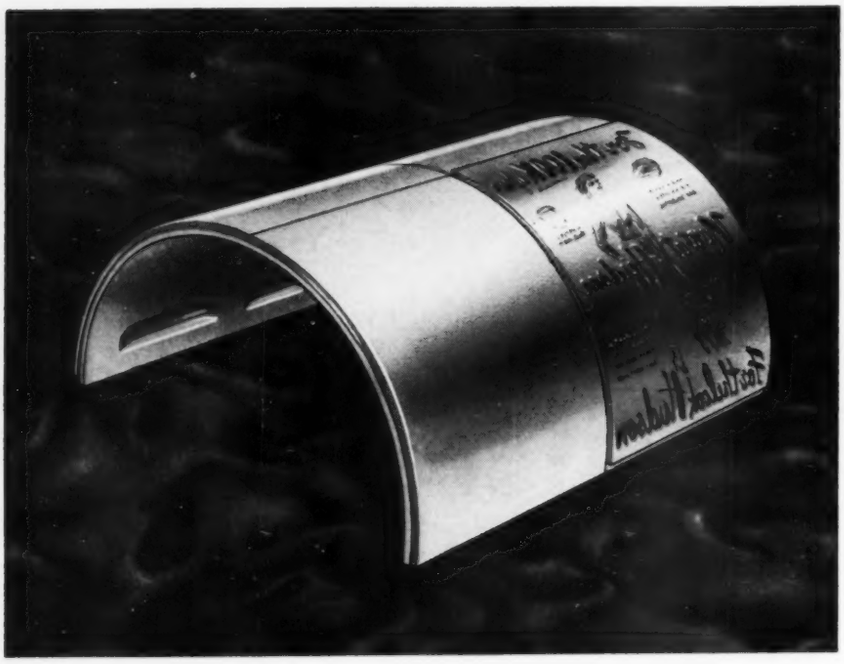
NEWS ITEMS

Joins Hughes Corporation—T. A. Dadisman has left his post as vice president of Printing Developments Inc. to join Hughes Corporation of New York. Dadisman, who joined Printing Developments in 1950 as head of the Offset Plate Div., will serve as marketing consultant for Hughes. Hughes produces over 300 publications from eight plants located in Connecticut and Pennsylvania. The company has an expansion program underway with special emphasis on sheetfed and webfed offset printing.

Ludlow Elects Officers—Robert W. Buckley, former general sales manager, R. Hunter Middleton, director of typeface design, and Lawrence Helmick, former export manager, were elected vice president of domestic sales and advertising, board member and vice president of export sales respectively for Ludlow Typograph Co., Chicago. Buckley, a graduate of Brown University and Harvard Graduate School of Business Administration, has been with the firm since 1950. Middleton, with Ludlow since 1923, has designed some 80 typeface series. Tempo, Karnak, Mayfair, Coronet, Radiant, Admiral Script, Ludlow Bodoni Modern and Record Gothic are among his creations. Helmick came with Ludlow in 1920.

BUCKLEY

MIDDLETON



Let us tell you more about the Advantages of Using Magplate Products

PRECISION MAGNESIUM NEWSPAPER SADDLES make possible direct printing from the original engraving. The many advantages include perfect color register, better impressions on newsprint, high fidelity.

PRECISION MAGPLATE PHOTOENGRAVER'S METAL is accurate in gage thickness ±.0005. Very hard surface. Close tolerance eliminates make ready for plate level inaccuracies, reducing press down-time.

PRECISION BACK-UP PLATE—very light weight—the perfect base for electros, rubber plates, engravings, plastic plates.

PRECISION CURVING OF MAGPLATE. Extremely accurate. We can curve before or after etching to any diameter, plate thickness.

CHROME PLATING OF MAGPLATE will give you plate protection and longer press runs.

Send for Magplate folders with more facts about these products and services.

MAGPLATE DIVISION
Brooks & Perkins, Inc.
1968 West Fort St.
Detroit 16, Michigan

60-M-1

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Banknote Company Acquires 20th Century Press — Security-Columbian Banknote Co. has acquired Twentieth Century Press, Inc., of New York. The latter company will be continued as a wholly-owned subsidiary at its 130 Cedar St., New York address. It will be known as Twentieth Century Press Div. of Security-Columbian Banknote Co. At the time of the acquisition, Security Columbian Banknote Co. announced the election of Pemberton Whitcomb as executive vice president and Douglas C. Wyman and Charles Roome, vice presidents.

Spitaleri Becomes Sta-Hi President—Vernon R. Spitaleri was elected president of Sta-Hi Corporation at the recent annual meeting of the board of directors. He had served the last four years as executive vice president. Craig C. Baker, one of the company's founders in 1928 and president since 1945, was elected chairman of the board.

BAKER

SPITALERI

Spitaleri, who has served as research director of Knight Newspapers and manager of the mechanical department of the American Newspaper Publishers Assn., will also continue to serve as president of Sta-Hi Color Service. Oth-

Save with Powerlith Developer Concentrate

Now, Chemco introduces a pre-mixed, liquid, two-part formaldehyde developer concentrate ready for immediate use by simply adding it to water. Packaged in unbreakable 5-gallon Cubitainers. All you do is place container on shelf and draw off A and B concentrate as needed. No more dissolving powders with possible errors in formulation. No double handling. As developer is used, container collapses eliminating aerial oxidation and insuring unlimited shelf life.

Add undiluted Powerlith Concentrate to replenish tired developer, thus making one bath last an entire shift. One set of A and B 5-gallon containers makes 20 gallons of developer. Order a supply today, plus Chemco Power-Fix to complete your darkroom changeover.

chemco

Chemco Photoproducts Co., Inc.

Main Office and Plant — Glen Cove, New York

Atlanta, Boston, Chicago, Cleveland, Dallas, New Orleans, New York
Exclusive West Coast Agents: California Ink Company, Inc.
Exclusive Agents in Canada: W. E. Booth Company, Ltd.

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er officers named are Donald V. Weber, vice president and secretary; O. T. Cochran, vice president and director of sales; Samuel D. Oderman, vice president engineering, and Lee Yake, treasurer.

DeWitt of RIT Joins Friden—Frank A. DeWitt, former assistant head of Rochester Institute of Technology's Graphic Arts Research Dept., has been appointed by Friden Incorporated, to its product planning department for Graphic Arts equipment at Rochester, N. Y. DeWitt, Graphic Arts consultant, teacher and author, has long been associated with Commercial Controls Corp., a Rochester subsidiary of Friden. He has served as consultant and director of Graphic Arts research for that firm at different times. A graduate of Middlebury College, DeWitt also taught at RIT for many years. He has written many articles published in PRINTING PRODUCTION.

DeWITT

COATE

Coate Succeeds Thome at Sun Chemical—Weldon R. Coate has been appointed acting general manager of the Graphic Arts Group of Sun Chemical Corp., to succeed J. S. Thome. Coate will be responsible for the operations of the General Printing Ink, Geo. H. Morrill, Rutherford and Chemical Coatings divisions. With the company since 1930, Coates' most recent position was general manager of Sun's Midwestern printing ink operations. In that capacity, he directed 14 plants. J. S. Thome, former vice president, resigned after three years association with Sun.

Judd & Detweiler Purchases Book Dept.—The book department of Lord Baltimore Press of Baltimore has been purchased by Judd and Detweiler, Inc., of Washington, D. C. Re-named Port City Press, Inc., the entire operation will soon be relocated in a new plant set on a 3 A. site in Pikesville, Md.

Named to Webb Publishing Board of Directors—Blaine W. Sargeant, former night and general plant superintendent of Webb Publishing Co., and Bert O. Lund, former Webb advertising manager, have been named to the firm's board of directors. Webb is currently involved in a $5 million expansion program, which includes construction of a new $3 million building to house all operations and administrative offices of the company.

Baler Rights to Chicago Firm—H. A. Raab, president of East Chicago Machine Tool Corp., announces the acquisition of the manufacturing rights to the products of Baler Corporation and the trade name Balewell. The products consist of a full line of vertical type scrap baling presses.

New Printing Plant Superintendent—Charles L. Campbell has been appointed superintendent of the Hercules Powder Co.'s printing plant. Campbell has been assistant superintendent of the plant for the past two years and succeeds James A. Mayhart, Sr., who has recently retired.

Rutherford Moves Midwest Office—The Rutherford Machinery Div. of Sun Chemical Corp., announces the moving of its Midwest sales office to 544 Washington Blvd., Chicago 6.

motor driven
ARC LAMPS

Prove nuArc's efficiency in your plant for 30 days—you'll never use any other type of lamp again! Available for all cameras, printing frames, and photo composing machines. For complete information, ask your graphic arts supplier or send for Bulletin A205PP.

Here are some facts you should consider before buying lighting of any kind:

- Carbon arc lamps burn uniformly and consistently throughout the life of the carbons. They do not change in color, temperature or intensity. This is an exclusive characteristic of motor driven carbon arc lamps.
- You save 30% in the operation of carbon arc lamps as compared with any other types of lighting.
- You get faster, sharper exposures with a carbon arc lamp.

There is no substitute for carbon arc lighting in a production and quality house. nuArc makes the finest motor driven lamps.

another BUILT-RIGHT PRICED-RIGHT item from nuArc® COMPANY, INC

General Office and Factory: 4110 W. Grand Ave. • Chicago 51, Ill.
Sales and Service: New York • Los Angeles

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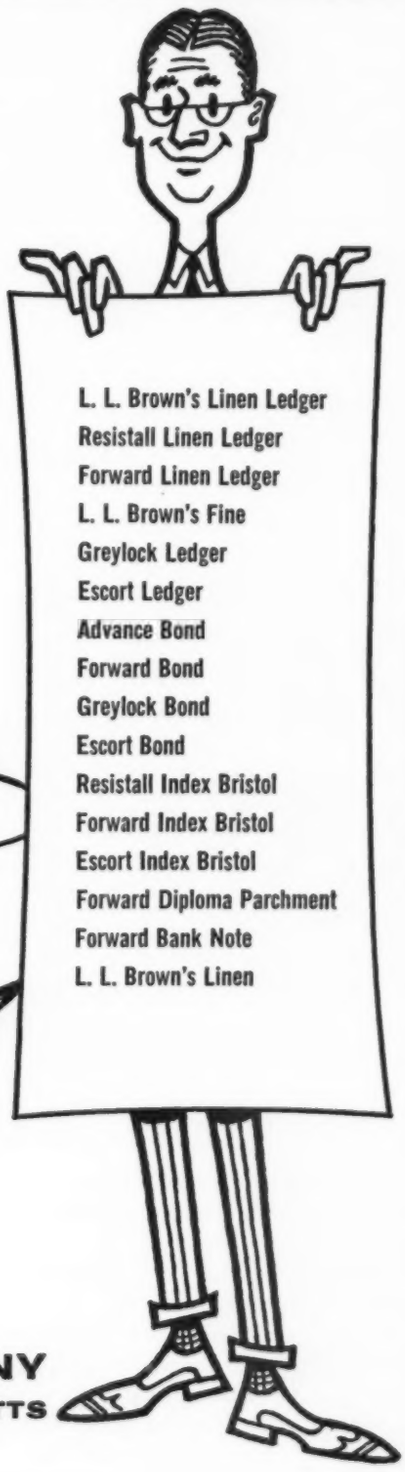
when the job
requires a cotton fiber paper

call your L. L. BROWN distributor

Next time you have a printing job that calls for extreme durability, you'll find just the right L. L. Brown paper to meet every demand. Choose from these special purpose papers of every grade and weight . . . 50% cotton content to permanent record papers made of 100% new white cotton cuttings.



L. L. Brown's Linen Ledger
Resistall Linen Ledger
Forward Linen Ledger
L. L. Brown's Fine
Greylock Ledger
Escort Ledger
Advance Bond
Forward Bond
Greylock Bond
Escort Bond
Resistall Index Bristol
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Escort Index Bristol
Forward Diploma Parchment
Forward Bank Note
L. L. Brown's Linen

All L. L. B. papers are available in rolls as well as special size sheets.

"The QUALITY which has earned its reputation"

L. L. BROWN PAPER COMPANY
ADAMS, MASSACHUSETTS

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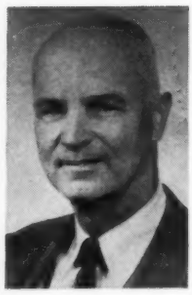
KUHNS

GIBBS



OTTER

SCHULLER

Imperial Appointments Announced—At a recent meeting, the Imperial Type Metal Co. board of directors elected to vice presidency: Roy C. Kuhns, Western sales manager of type metals, and Spilman B. Gibbs, assistant manager of the Photo Products Div. Kuhns has served the company since 1949 and Gibbs since 1958. Lewis S. Somers, president of Imperial, has announced the appointment of William C. Otter, vice president, as general sales manager of type metals, and Edward Schuller, as Eastern division sales manager of type metals.

Harris-Seybold Handles Stevens Line—Harris-Seybold Co. has become the exclusive distributor in the U.S. and Canada for Charles R. Stevens, Inc., line of automated finishing room equipment, according to a joint announcement by the two firms. The line includes automatic unstackers and trimmer loaders, finished skid stackers, levellators, skid lifts and related sheet handling devices. The equipment will continue to be manufactured by Charles R. Stevens, Inc., Maumee, O.

Distributor for Herbert Products—Herbert Products, Inc., announces that its Curastat static eliminator will be sold exclusively by Addressograph-Multigraph Corp. for installation on AM equipment. Addressograph-Multigraph will handle the distribution on a world-wide basis.

William G. Johnston Elects VP's—Harry T. Gardner was elected vice president and Albert B. Fall was elected vice president of sales at the annual meeting of William G. Johnston Co., Pittsburgh.

Du Pont Moves Sales Office—The New York sales office of Du Pont Company's Dycril printing plates has been moved from 40 Worth St. to 248 W. 18th St., Donald C. Nolte, sales supervisor for the New York-New England area, has announced.

G-E Names Packaging Engineer—Clayton N. Golyzniak has been named packaged drive sales specialist by General Electric's Industry Control Dept. He will head a new function within the department's marketing organization, finding new applications for packaged adjustable speed drives in industry. He will also provide special technical assistance to customers.

New 3M Sales Office—Minnesota Mining and Mfg. Co. announces the beginning of construction on a new branch sales office and warehouse in Needham, a suburb of Boston. Printing products will be handled through the new North-

when you use the TRI-Q TOASTER...

PACKLESS MATS ARE EASY TO CONTROL!

CASE HISTORY: A major metropolitan newspaper printing both daily and Sunday editions was able to convert to a 100% "packless" mat operation a year ago because the Tri-Q Toaster solved the problems that had previously plagued them with "packless" mats.

This newspaper found that predrying methods used for standard mats were less than adequate to efficiently process "packless" mats. When they installed their Tri-Q Toasters they found that the modifications in their casting equipment were all that was required to switch over to "packless" mats. With just two Tri-Q Toasters they were able to handle their entire workload of "packless" mats in about half the time formerly required.

The major advantage, they found, is that the mat pre-shrinks in a flat state preventing molding distortions from becoming "set." No warps or buckles are formed when using the Tri-Q vacuum pre-drying method. In fact the mats are so flat they actually snap as they seat to the vacuum plate in the former.

The addition of the Tri-Q Toaster reduced the work load of their formers and saved up to 3¾ minutes in forming time alone.

Great improvements in the quality of their halftones and ROP color were also noticed. They also found that it was quite practical to retain their required ⅞ inch shrinkage with "packless" mats when they used the Tri-Q Toasters. They were now able to beat their previous starter time 5 to 10 minutes.

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For More Information Circle 199 on Reader Service Card

To date... 35

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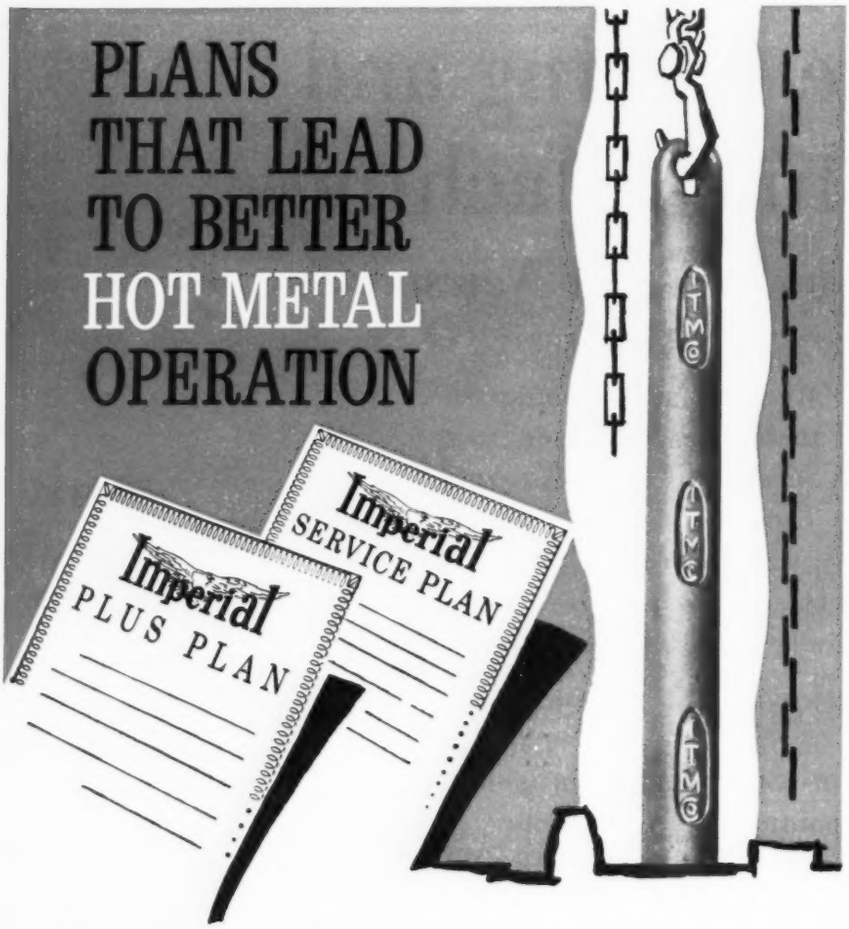
eastern office, which will reportedly provide double the space available at the firm's present Northeast branch.

Becomes Hoe Board Member—R. Palmer Hollister, former treasurer of R. Hoe & Co., Inc., has been named to fill a vacancy on the company's board of directors. J. L. Auer, president of the firm, announced the appointment.

PRITCHARD

EWING

Southam Printing Appoints Officer—Edgar M. Pritchard has been appointed vice president and managing director of Southam Printing Co., Ltd., Toronto, Can. Pritchard has served as general manager of the Printing Industries of Ontario since 1957. He succeeds J. F. Hayes, who retired last December.



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New General Manager for Meredith Printing—Gordon R. Ewing, former manager of the engineering division of R. R. Donnelley & Sons Co., Chicago, has been named vice president and general manager of Meredith Printing, Inc., affiliate of Meredith Publishing Co. The announcement was made by Fred Bohen, president of Meredith Printing, Inc., which is responsible for producing *Better Homes & Gardens*, *Successful Farming*, books and a variety of other printing.

Harris-Seybold Announces Appointments—C. A. Loefgren and Lloyd G. Butler have been appointed vice president of sales and sales manager respectively of Harris-Seybold Div., Harris-Intertype Corp. Loefgren has been

BUTLER

LOEFGREN

with the company for 14 years, serving as general sales manager since 1957. He was previously Western district manager in Chicago. Butler joined Harris-Seybold in 1949 and was one of the first graduates of its executive development program.

Minneapolis Firm Elects Officers—Raymond J. Burke has been elected vice president, and Hanley M. Thompson assistant secretary of Jones Press, Inc., Minneapolis. Burke was formerly with the U.S. Government Printing Office, Washington, D. C.

Borrowdale Expands—R. W. Borrowdale Co. announces its new location at 230-270 W. 83rd St., Chicago 20. The new quarters will triple the firm's manufacturing and office facilities.

To Speak on European Typography—Walter Plata, European lecturer, typographer and designer, will visit the U.S. this month and speak in various parts of the country for six to eight weeks on *European Typography Today*.

Wilsolite Opens St. Louis Warehouse—Samuel D. Wettlaufer, president of Wilsolite Corporation, has announced the opening of new offices and warehouse facilities for rubber printing materials in St. Louis.

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Roanoke Pressroom Superintendent Dies—Robert Roscoe Fulton, former pressroom superintendent of the Roanoke (Va.) *World-News and Times*, died Mar. 6 at his home in Roanoke. Mr. Fulton, 70, had been with the paper for 44 years before his retirement two years ago.

Flint Ink Appoints New England Manager—Kenneth E. Mann, formerly of General Printing Ink, Div. of Sun Chemical Corp., has been appointed New England district manager of Flint Ink Corp. He will make his headquarters in Needham, Mass. Flint Ink recently opened manufacturing plants in Paterson and Palisades Park, N. J.

Eastern Paper Distributor—Marvin Paper Corp. has been appointed franchised merchant for the distribution of Eastern fine business and printing papers. The announcement comes from Charles De Zemler, Jr., sales manager of fine papers, Standard Packaging Corp., Pulp and Paper Div.

ATF Appoints Two Sales Representatives—Charles W. Plattner has been assigned to the Chicago branch and Roy F. Suiter to the Minneapolis branch of

PLATTNER

SUITER

American Type Founders Co., General Printing Equipment Div. Plattner, with six years of sales and operating experience in the Graphic Arts, will cover the southern part of Chicago. Suiter's territory will include Nebraska, S. Dakota and parts of Iowa. He will base his operations at the company's Omaha, Neb., sub-office.

To Represent Star Parts—Ralph Bright has been named sales representative for Star Parts, Inc., in Indiana and most of Illinois. Harry Wilson, formerly of this territory, has taken a situation in Massillon, O., after 22 years in the Great Lakes area.

BRIGHT

ELKIN

New Acrolite Vice President—William Elkin, formerly of Anchor Chemical Corp., has been appointed vice president in charge of sales of Acrolite Products, Inc.

Appointed Assistant Sales Manager—Robert P. Simoncini, 15 year member of the Hobbs Mfg. Co., has been appointed assistant sales manager of the firm's Machine Div. Simoncini was formerly sales and service engineer in the New York area office.

Kohl and Madden Acquires Detroit Firm—Kohl and Madden Printing Ink Corp. announces the acquisition of Cadillac Printing Ink Co. of Detroit. Cadillac personnel will continue to serve at the Detroit plant, which will be under the supervision of Vic Paul.

Joins Jomac Office Staff—Nicholas V. Riccio has joined Jomac Inc., as Metropolitan New York office manager specializing in Graphic Arts rollers. His headquarters will be in N. Bergen, N. J.

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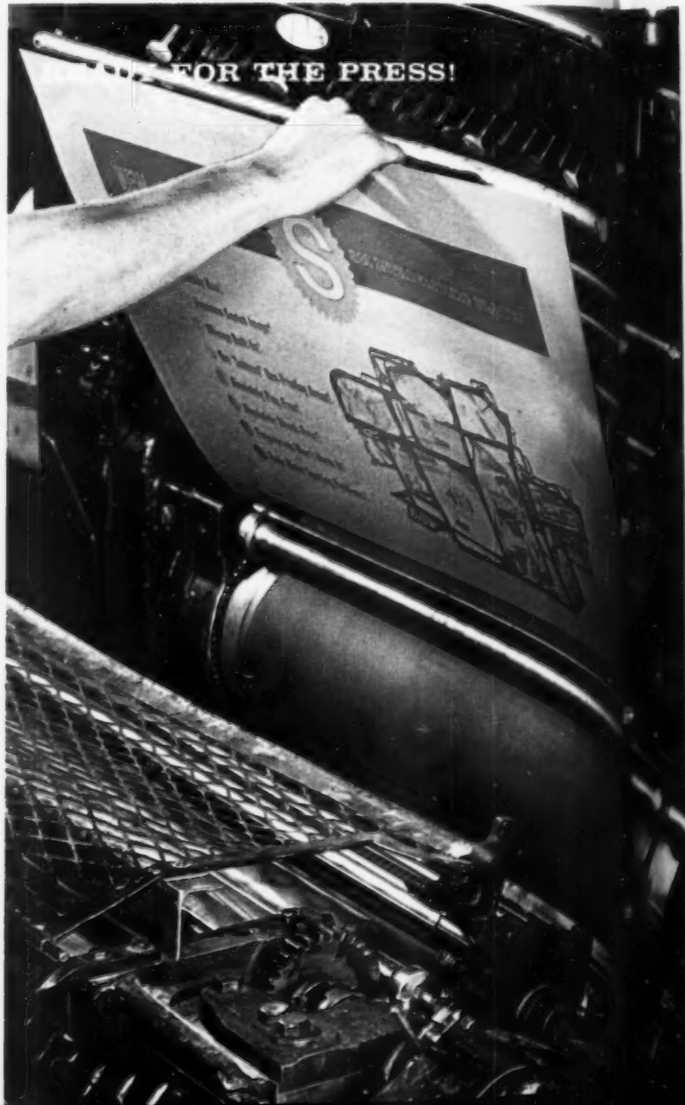
WIPE AWAY NON-PRINTING AREAS . . .

RINSE . . . AND TYPE "S" IS


FOR THE PRESS!

FROM 3M RESEARCH comes a totally different kind of photo offset plate . . . to complement your craftsmanship with the ultimate in printing quality! For years 3M's scientists and technicians have been working toward a superior negative photo offset plate that would be simpler to develop, that would have a more uniform image, that would faithfully mirror the most difficult original copy, that would eliminate most handling problems, and—with all this—produce higher quality in longer runs.

Today such a plate is a reality—the 3M Brand Type "S" Photo Offset Plate—with a totally different kind of pre-sensitized surface coating. It's a unique coating—so precisely applied there is no room for variables—so hard and durable it gives press mileage that will meet all surface plate requirements.

...the only subtractive pre-sensitized surface plate in the history of lithography!

SUBTRACT TO GET PLUS PRINTING QUALITY. This new Type "S" Plate is amazingly simple to develop—and so care free to handle. You get a working image that is perfectly uniform across the plate. It's absolutely plug-free—actually, you un-plug this plate to develop. Because the running surface is factory-applied solids are completely streak-free, healthy, and uniform . . . halftone dots are crisp, distortion-free . . . screens are sharp, clean, clear . . . tints and ben days are perfect, precise, open . . . difficult layouts with screens butted to solids, halftones, ben days, and fine tints are flawless—easily plated. And, the new Type "S" is impervious to finger prints, water spotting, heat and humidity.

If your plant handles extended run process work—web fed rotary business job forms—multi-color work—metal decorating—any jobs that demand the very highest printing quality —3M's new Type "S" Plate is for you.

SO SIMPLE, YOU HAVE TO SEE IT TO BELIEVE IT! Reserve a demonstration in your own shop now!

YES! I want a demonstration of the new 3M Brand Type "S" Photo Offset Plate in my shop right away. Will you have a 3M Representative call me to arrange the date and time.

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- Conveyors

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- Coverers
- Side Stitchers
- Inserters
- Three-knife Trimmers
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BOOKS for the PRINTING INDUSTRY

Halftone Photography for Offset Lithography

The new *Halftone Photography for Offset Lithography,* published by Lithographic Technical Foundation, is designed as a complete reference manual for the experienced process photographer as well as recommended reading for plant management.

The book's 16 chapters are carefully subdivided into more than 66 sections which deal with the specific production techniques of halftone reproduction and the theory behind them. This book contains 63 illustrations and six tables which are intended to aid the reader in understanding step-by-step instructions for making quality halftones from all kinds of copy and by all known techniques.

The text has been revised to include chapters on equipping and laying out an efficient camera department; selection and evaluation of the process lens; theory and practice of densitometry for better tone control; selection and proper use of filters; handy reference section containing conversion tables, film and plate comparison charts and other instructional and reference details which have been brought up to date.

The book is also directed toward the young halftone photographer who is developing his knowledge.

Halftone Photography for Offset Lithography is priced at $6, plus shipping and handling charges. Orders may be placed with Lithographic Technical Foundation, Inc., 131 E. 39th St., New York 16.

Lithography in 1960

Lithography in 1960 contains the 33 papers and corresponding discussions which were presented at the Offset-Litho Conference of the Printing, Packaging and Allied Trades Research Assn., held at Harrogate, England, in Feb. 1960.

Thirty-three separate contributions made by experts in copy preparation, camera work, paper and ink, phototypesetting, printing processes, machines, color measurement and electronic color correction are presented and illustrated in color and black and white in this 484 page hard bound book.

A technical feature of the volume is that the papers have been set on one of the major phototypesetting machines—Linofilm, Photon, Monophoto and Fotosetter.

Six reports in the book suggest recommendations for improving quality and production efficiency in the offset lithography field.

Lithography in 1960 is available to members of PATRA for $14.75 and to non-members for $29.50. Both prices include handling and postage. Orders should be addressed to the Librarian, The Printing, Packaging and Allied Trades Research Assn., PATRA House, Randalls Rd., Leatherhead, Surrey, Great Britain.

Lee Streamlined Copyfitting Manual

More than 1730 listings of all popular foundry and machine type faces from 4 to 24 pt., including lowercase, caps and small caps, are listed in the new 1961 *Lee Direct Visual Control Streamlined Copyfitting Manual.*

This 74 page manual is accompanied by a plastic gauge which is comprised of 28 scales for measuring on sight the

continued on page 114

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No partitions—no exhaust systems. One complete compact unit with vacuum frame on top and carbon arc lamp enclosed in base. 6 sizes all described in Bulletin A500

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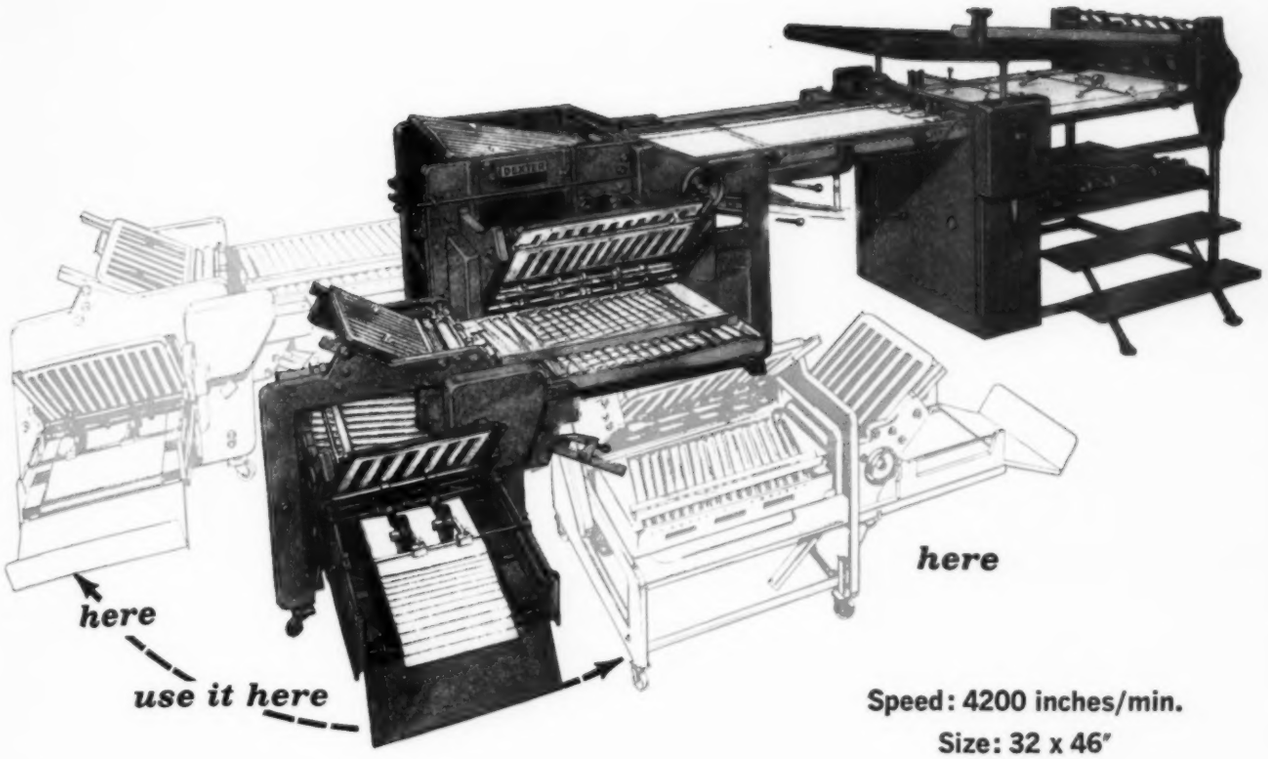

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4-7-2	4-8-2	6-2	7-2	8-2

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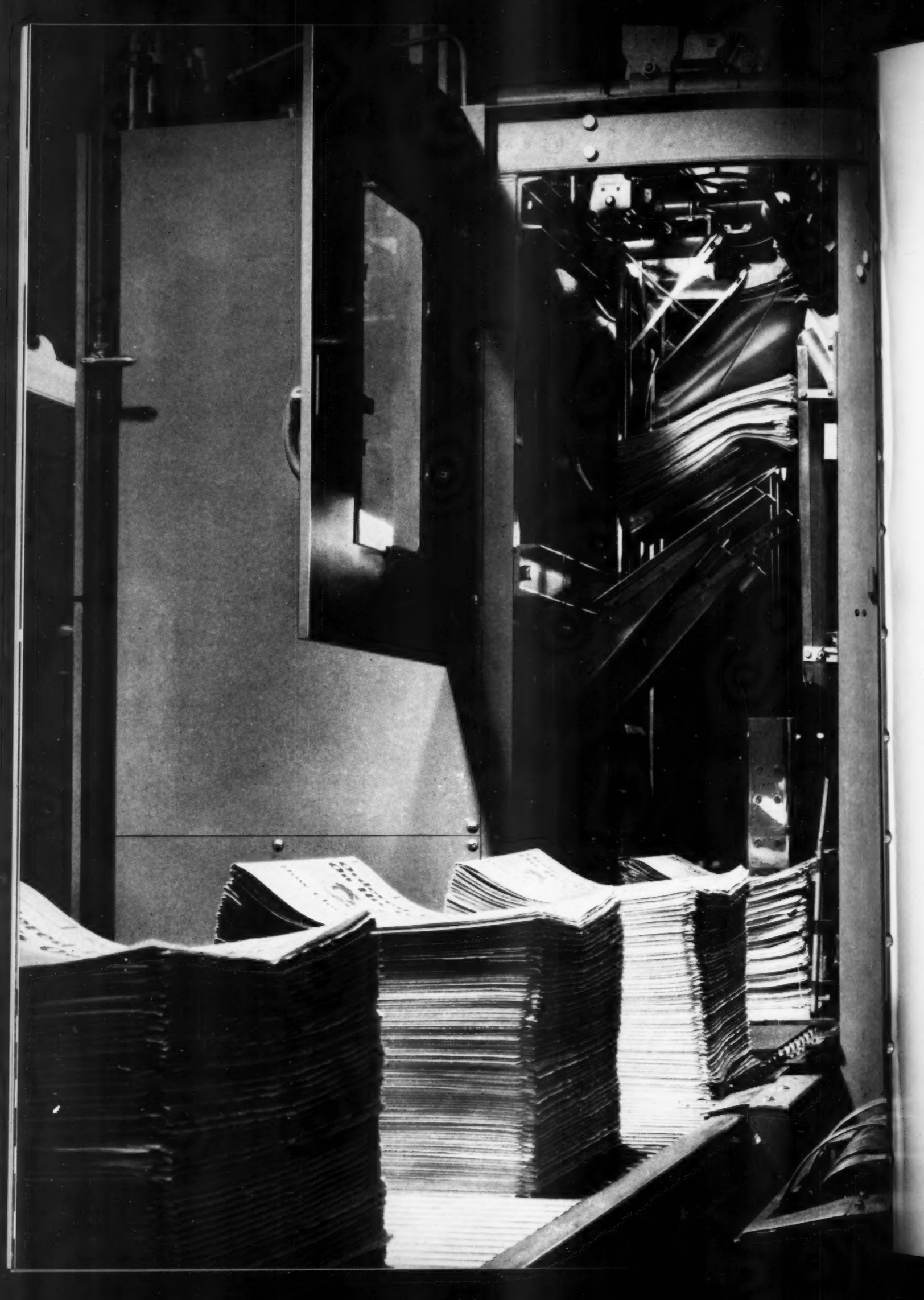

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Cutler-Hammer systems engineering not only gives you the most efficient system, but also gives you complete *one source responsibility* for mailroom automation.

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Counter-Stacker illustrated was photographed in operation at the Chicago Sun-Times. A total of 76 Counter-Stackers are now installed or on order. Customers include: Baltimore Sun, Chicago Daily News, Cleveland Plain Dealer, Cleveland Press, Detroit News, El Paso Times & Herald Post, Fort Worth Star Telegram, Indianapolis Star News, Jackson (Miss.) Clarion Ledger, Jackson Daily News, Los Angeles Examiner, Milwaukee Journal, Philadelphia Bulletin, Washington Post and Washington Star.

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MEETINGS for the PRINTING INDUSTRY

American Photoengravers Assn.—1961 Conv., Pittsburgh Hilton Hotel, Pittsburgh, Oct. 23-25. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Chicago 4.

ANPA-RI Production Management Conf.—1961 Conf., Palmer House, Chicago, June 5-7. Mgr. William D. Rinehart, ANPA-RI Mechanical and Service Div., 750 Third Ave., New York 17.

Book Manufacturers' Institute – 1961 Annual Meeting, Boca Raton Hotel, Boca Raton, Fla., Oct. 17-20. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36.

Fifth District Craftsmen's Conf.—1961 Conf., Sheraton Hotel, Akron, O., Apr. 28-29. President Leonard A. Pollina, 71 W. Bowery St., Akron 8, O.

Flexographic Technical Assn. – 1961 Meeting, Hotel Roosevelt, New York, Feb. 9-10. Exec. Secy. Julian Ross, 220 W. 42nd St., New York 36.

Graphic Arts Assn. Executives – 1961 Spring Meeting, Chase Park Plaza Hotel, St. Louis, June 2-3. Secy.-Treas. Doris Hall, 321 Tower Bldg., Washington 5, D. C.

Gravure Technical Assn.—Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20.

Great Lakes Mechanical Conf.—1962 Conf., Claypool Hotel, Indianapolis, Jan. 14-16. Secy. John E. Innis, R. R. No. 1, Box 546, Indianapolis 27, Ind.

Illinois Newspaper Mechanical Conf.—1961 Conf., Sheraton Towers, Chicago, Sept. 23-24. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News*.

Intl. Assn. of Electrotypers & Stereotypers, Inc.—1961 Conv., Shoreham Hotel, Washington, D.C., Oct. 2-5. Exec. Secy. Floyd C. Larson, 758 Leader Bldg., Cleveland 14.

Intl. Assn. of Printing House Craftsmen—1961 Conv., Palmer House, Chicago, Aug. 6-9. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19.

Intl. Graphic Arts Education Assn.—1961 Conf., Ferris Institute, Big Rapids, Mich., Aug. 13-18. Exec. Secy. Samuel M. Burt, 1411 K St., N.W., Washington 5, D. C.

Intl. Printers Supply Salesmen's Guild—1961 Meeting, Palmer House, Chicago, Aug. 6-9. Secy. Harry Deck, 75 E. Wacker Dr., Chicago 1.

Intl. Typographic Composition Assn.—1961 Conv., The Queen Elizabeth, Montreal, Can., Oct. 4-7. Exec. Secy. McKinley M. Luther, Washington Bldg., 15th St. and New York Ave., N.W., Washington 5, D. C.

Iowa Newspaper Mechanical Conf.—1961 Conf., Hotel Blackhawk, Davenport, Ia., May 26-28. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald*.

Lithographers and Printers National Assn.—1961 Conv., Arizona Biltmore, Phoenix, Ariz., Apr. 30-May 5. Dir. Oscar Whitehouse, 1025 Connecticut Ave. N.W., Washington 6, D. C.

Mid-America Newspaper Mechanical Conf.—1961 Conf., Hotel Muehlebach, Kansas City, Mo., Sept. 8-10. Secy. Cliff Waters, Kansas City (Mo.) *Star*.

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Ed Fraher—like all BURGESS men—is *more* than a salesman. He's an experienced stereotyper who talks your language, knows your problems.

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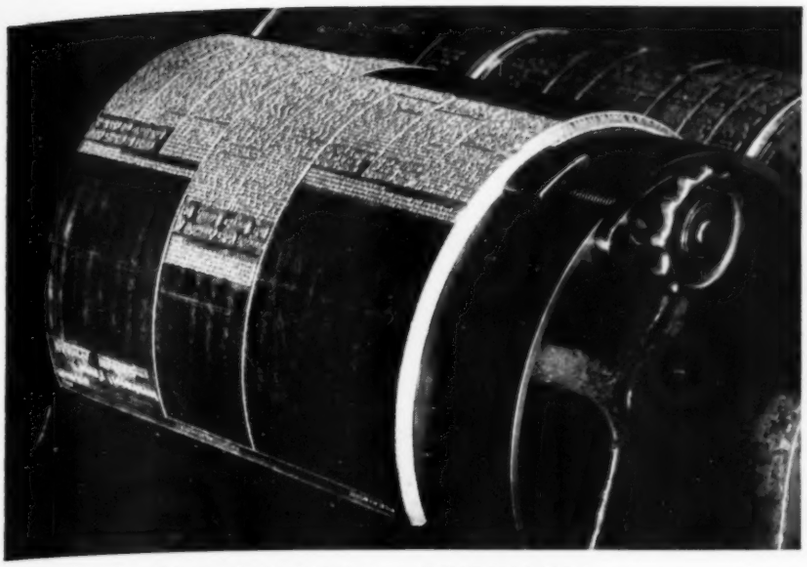

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You lock up page forms with blank bases in picture position, mat and cast. As pictures come in, they are engraved on the Scan-A-Graver right in your plant, automatically, in minutes, then mounted in position on the curved stereo with double faced tape.

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They're produced on Scan-A-Plate®, Fairchild's specially formulated, quality-controlled, low cost engraving material which combines flexibility with amazing toughness.

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Excellent. Scan-A-Plate has excellent ink-transfer qualities. All Fairchild electronic engravers produce a true pyramid-shaped halftone dot angled 45° for sharp, clear reproduction.

Can you mat with these engravings?

Absolutely.

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The electronic "eye" of the Scan-A-Graver eliminates all "guess work." The exclusive Fairchild stroboscopic microscope lets you watch the shadow, intermediate and highlight dots (magnified 80 times) as you adjust them to desired size.

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Mid-Atlantic Newspaper Mechanical Conf.—1962 Conf., Hotel Shelburne, Atlantic City, N. J., Mar. 29-31. Gen. Mgr. G. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

National Assn. of Litho Clubs, Inc.—1961 Conv., Biltmore Hotel, Dayton, O., May 4-6. Exec. Secy. Edward M. Harwood, 430 S. Clark St., Chicago 5.

National Assn. of Photo-Lithographers—1961 Conv., Hotel Commodore, New York, Sept. 27-30. Exec. Vice Pres. William J. Stevens, 317 W. 45th St., New York 36, New York.

National Paper Trade Assn.—1961 Conf., Conrad Hilton Hotel, Chicago, Oct. 31-Nov. 3. Exec. Secy. O. Glenn Leach, 220 E. 42nd St., New York 17.

National Printing Equipment Assn., Inc.—1961 Meeting, Pittsburgh Hilton Hotel, Pittsburgh, Oct. 10-11. Exec. Secy. Harry L. Gage, 140 Nassau St., New York 38.

National Safety Council Printing and Publishing Section—Staff Rep. Harry C. Johnson, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Daily Newspaper Composing Room Executives Assn.—Exec. Secy. Lewis R. Greene, Westerly (R.I.) *Sun.*

New England Newspaper Mechanical Conf.—1961 Conf., Hotel Statler Hilton, Boston, Oct. 21-22. Secy.-Treas. Walter C. Crighton, New London (Conn.) *Day.*

North Carolina Press Assn. Mechanical Conf.—Miss Peggy Chears, P. O. Box 5125, Raleigh, N. C.

Northwest Mechanical Conf.—Secy. Treas. Ralph N. Carson, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.

Pacific Newspaper Mechanical Conf.—1961 Conf., Jack Tar Hotel, San Francisco, Sept. 8-10. Secy. Edward J. Maggi, Phillips & Van Orden Co., Fourth & Berry Sts., San Francisco.

Packaging Institute Assn.—1961 Meeting, Biltmore Hotel, New York, Oct. 18-22. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17.

Printing Industry of America—1961 Conv., Statler Hilton Hotel, Pittsburgh, Oct. 9-14. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave., N. W., Washington 15, D. C.

Research and Engineering Council—1961 Meeting, Hotel Fort Des Moines, Des Moines, Ia., May 22-24. Managing Dir. Robert E. Rossell, 1411 K St., N. W., Washington 5, D. C.

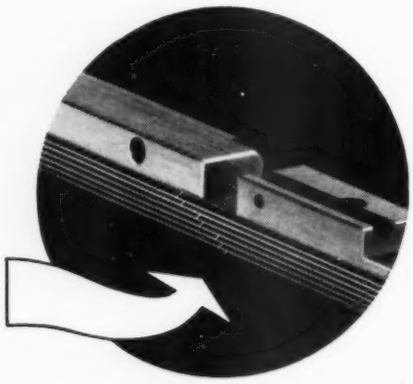
SNPA (Eastern Div.) Mechanical Conf.—1961 Conf., Hotel Dinkler-Plaza, Atlanta, Aug. 6-8. Secy. James B. Brotbeck, P. O. Box 1569, Chattanooga 1, Tenn.

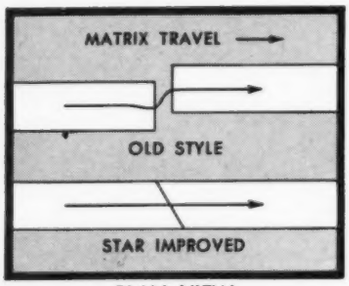
SNPA (Western Div.) Mechanical Conf.—1962 Conf., Oklahoma City, Mar. 4-6. Secy. Claude V. Capers, P. O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assn.—1961 Conf., Hotel Dinkler-Andrew Jackson, Nashville, Tenn., May 3-5. Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

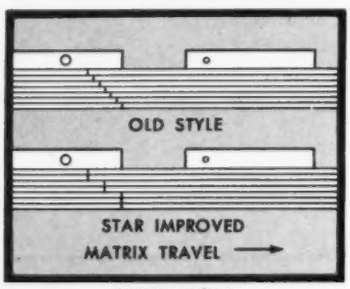
Technical Assn. of the Graphic Arts—1961 Conf., Deshler-Hilton Hotel, Columbus, O., June 11-14. Exec. Secy. Earl Sundeen, P. O. Box 3064, Federal Station, Rochester 4, N. Y.

ELIMINATE
the Costly Wear on this ¼ inch of Matrix Travel





PLAN VIEW



ELEVATION

...with the STAR improved Distributor Box Bar and Second Elevator Bar

Every time a matrix jumps the gap between the old style Second Elevator Bar and Distributor Box Bar, there is wear on the matrix teeth. The gap between these old style bars cannot be completely closed because there must be room for clearance between the two bars, otherwise they can hit each other. (See plan view at left.) Star has eliminated this problem by designing the joining point of the bars on a slant. This allows the Star improved Bars to actually touch each other when they are seated, leaving no gap for the matrix to jump and permitting the matrix to ride smoothly, without wear, from one bar to the other.

In addition, to reduce breakage of the Box Bar teeth, Star has reduced the number of "steps" in the bars from seven to three (see elevation at left).

To reduce bar breakage and to increase the life of your matrices, replace your old bars with the Star improved Second Elevator and Distributor Box Bars today.

When ordering please use Numbers G 137-A and G 2415-A . . . be sure to order in pairs.

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BRANCH: 1327 BROADWAY, KANSAS CITY, MO. **AGENCIES:** CHICAGO • MINNEAPOLIS • LOS ANGELES • DENVER SO. ACTON, MASS. • STAR PARTS (LINECASTING) CANADA LTD. MONTREAL AND AGENTS OVERSEAS

For More Information Circle 189 on Reader Service Card

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FAST, ACCURATE FOLDING

DEXTER (Cleveland) Folders have always been the "Choice of the Pros" for lasting dependability, unequalled accuracy and profitable, high speed operation. From the small 14x20" to the big 44x64" machine, they're all packed with more production advantages...scuff-proof air wheel feeder...automatic sheet registration...adjustable ball side guide...swinging deflectors on all fold plates...self-adjusting fold rollers... accurate scoring, perforating or slitting ...widest imposition versatility. Only Dexter offers so much folding profit potential. Ask any trade binder.

EXTER

R (Cleveland) Folders have al-
een the "Choice of the Pros" for
dependability, unequalled ac-
and profitable, high speed oper-
From the small 14x20" to the big
machine, they're all packed with
production advantages...scuff-
air wheel feeder...automatic
egistration...adjustable ball side
..swinging deflectors on all fold
...self-adjusting fold rollers...
te scoring, perforating or slitting
est imposition versatility. Only
r offers so much folding profit
ial. Ask any trade binder.

McCAIN

VOLUME SADDLE-BINDING

DEXTER and McCAIN combine to give you the ultimate in automatic saddle binding profitability. Insert, stitch and trim all three sides in one fast, smooth, continuous operation with McCain Signature Feeders, the Christensen Stitcher and the McCain 3-Knife Trimmer. Deliver finished books ready for packing and shipping...no troublesome handling or costly storing between operations. Between Dexter and McCain there's a full range of sizes and speeds ...4500, 9000 and 12,000/hr...for every saddle binding need—even a McCain 38″ Front Cut Trimmer.

McCain bindery equipment sold and serviced by the Dexter Company

Profit Builders from MGD for every pressroom or bindery need—in plants of every size

MIEHLE
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DEXTER
INCORPORATED
Chicago 8, Illinois

MGD

MIEHLE

KEEP THE PRESS PRINTING

MIEHLE Continuous Operation means volume printing at a profit... it lets you replenish the feeder and unload the delivery while the press keeps right on printing. Gives you plenty of advantages, too... fewer blanket wash-ups, constant uniform color, less down time and a drastic reduction of waste sheets. The Non-Stop Feeder and Continuous Delivery are standard on all Miehle Two-Color and Four-Color Offsets from the 25 thru the 49. For high speed, continuous operation, and quality color printing, you can't beat a Miehle... the press that produces volume at a profit.

LAWSON

LAWSON Pacemaker Electronic Spa
Cutters eliminate hand gauging, a
matically increase cutting accur
while increasing production. The uni
Rapid Signal Setting device enables
operator to set signals with hairline
cision... without moving the back ga
...delivers .002" accuracy throughou
complete series of cuts and trim-o
Lawson has two-speed back gauge, h
speed, two-end pull knife action
rugged heavy duty construction. Big
clamp opening, too. Lawson Pacema
Hydraulic Clamp Cutters are sized
69"... Electronic Spacer and the t
flexible Contour Clamp optional.

LITHO IN U

LAWSON

SPEED UP CUTTING ACCURACY

LAWSON Pacemaker Electronic Spacer Cutters eliminate hand gauging, automatically increase cutting accuracy while increasing production. The unique Rapid Signal Setting device enables the operator to set signals with hairline precision... without moving the back gauge ... delivers .002" accuracy throughout a complete series of cuts and trim-outs. Lawson has two-speed back gauge, high speed, two-end pull knife action and rugged heavy duty construction. Bigger clamp opening, too. Lawson Pacemaker Hydraulic Clamp Cutters are sized to 69"... Electronic Spacer and the truly flexible Contour Clamp optional.

LITHO IN U.S.A.

great new products have been added to the Plestar line:

Ansco Reprolith Plestar / Ansco Reprolith Matte Plestar

Famous Ansco Reprolith blue sensitive emulsion coated on Plestar® base—the perfect combination for both camera and contact exposures

Ansco Reprolith® Plestar

Offers all the benefits of time tested, blue sensitive, Reprolith emulsion plus the extreme dimensional stability of new Plestar base. Reprolith Plestar provides the high contrast line and dot formations essential to top quality reproduction work. In addition, this superb new product has low safelight sensitivity, permitting you to work in brighter darkroom illumination.

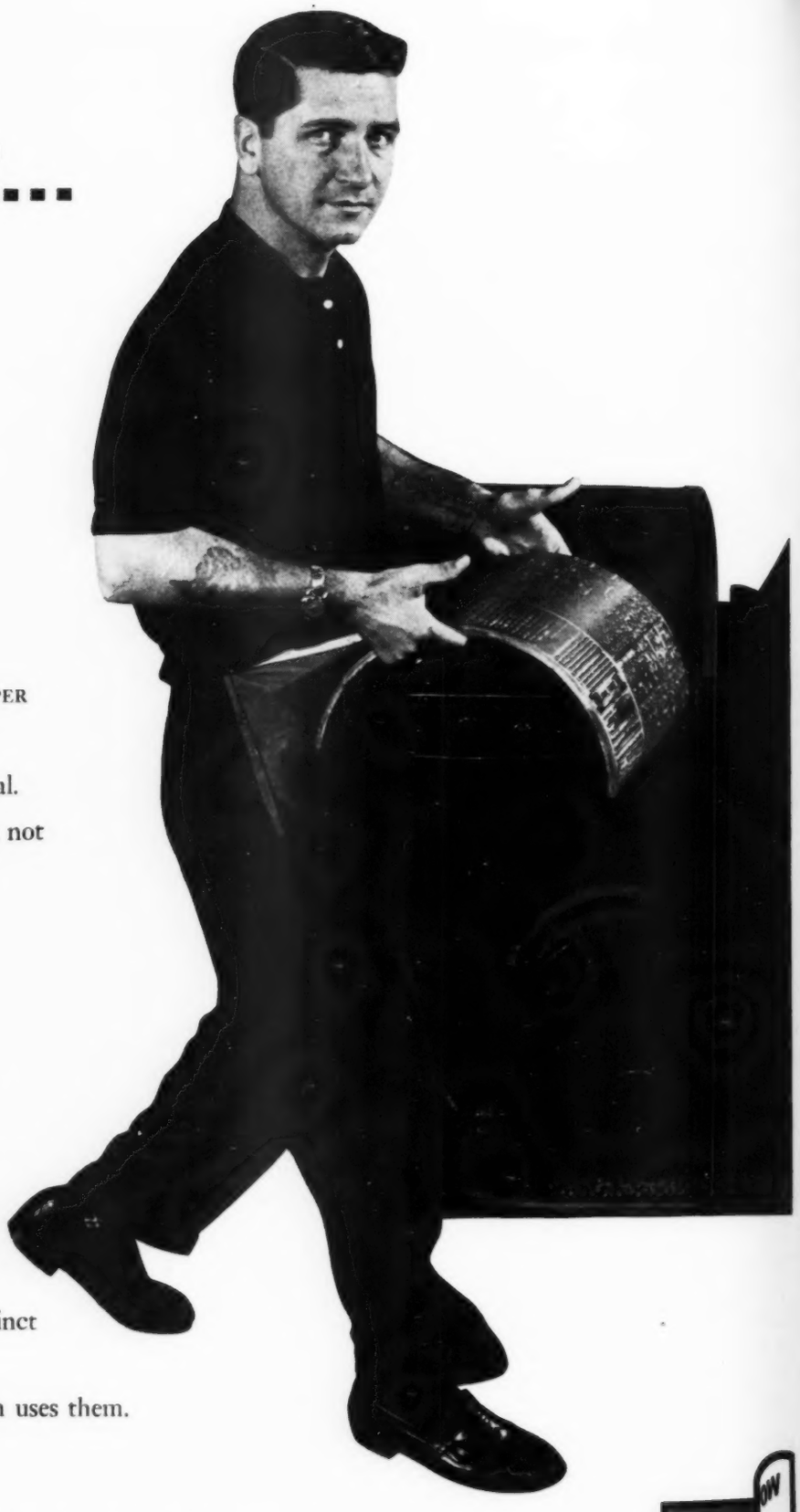
Ansco Reprolith Matte Plestar

Designed for either contact or camera exposure, this film provides all the benefits of Reprolith Plestar. Matte content in the emulsion facilitates retouching techniques. Your local Ansco representative will be glad to demonstrate Reprolith Plestar films at your convenience. Try both these fine products today. Ansco, Binghamton, New York. A Division of General Aniline & Film Corp.

Ansco PLESTAR
DIMENSIONALLY STABLE FILM BASE

For More Information Circle 8 on Reader Service Card

TIME...



A NEWSPAPER

heads the list of places where saving time is absolutely essential. Every minute saved in production not only cuts costs but also brings later news to the reader.

Super Flongs do this. They save time in the stereotyping department by eliminating the need for hand-packing — and their adequate space depth produces a clean-printing plate.

By saving time, Super Flongs save money — AND offer a distinct competitive "late news" advantage to the newspaper which uses them.

ONE-PIECE SUPER FLONG *NO-PACK MAT*
A NEW ERA IN STEREOTYPING

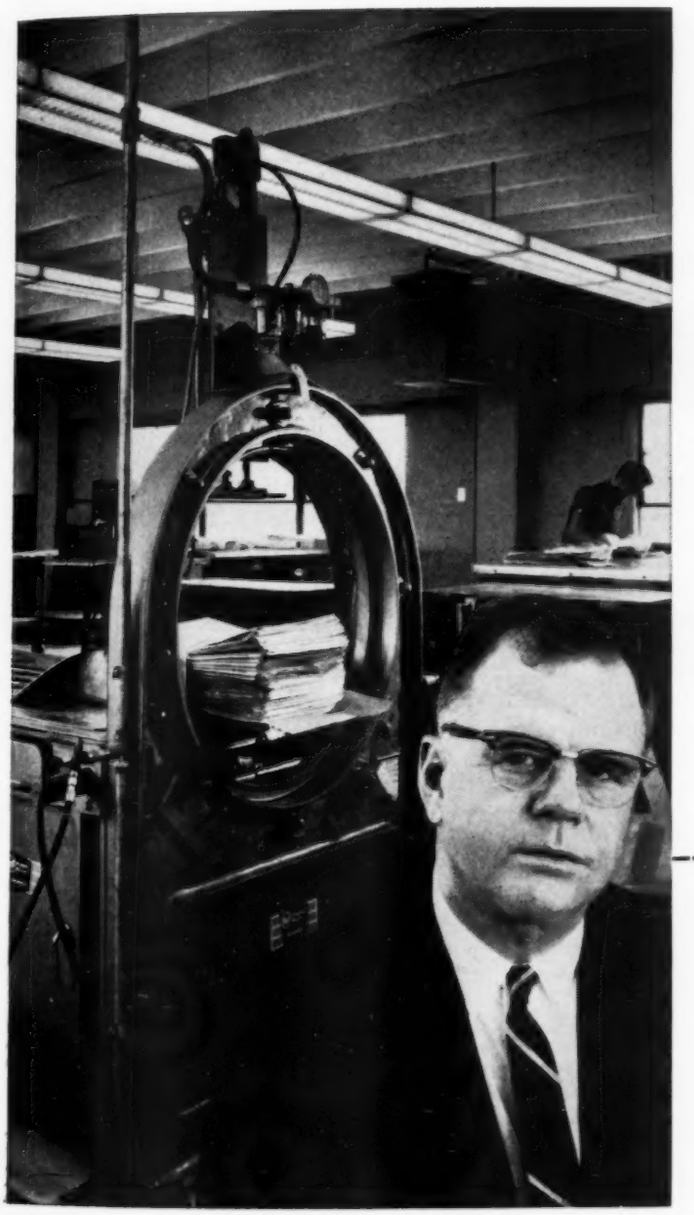
WOOD FLONG CORPORATION

HOOSICK FALLS, NEW YORK
NEW YORK OFFICE: 551 FIFTH AVE.; PHONE: MU 7-2950
SERVING THE GRAPHIC ARTS INDUSTRY EXCLUSIVELY SINCE 1911

For More Information Circle 217 on Reader Service Card

IT'S BOUND TO BE BETTER WITH USS STEEL STRAPPING

"This automatic Round Steel Strapping machine doubles wrapping capacity, and cuts strapping costs in half."



"Since we installed the new Model 1200 Automatic Strapping Machine, we have jumped our capacity from 10 to 21 bundles per minute," says Mr. W. R. Cummins, Circulation Director, The Pensacola News-Journal Company, Pensacola, Florida. "And with our previous semi-automatic model we used twice as much round strapping. The new Model 1200 makes a tighter, more compact bundle, and we are now able to use one, rather than two strapping ties."

"With this new machine our circulation can jump to 115,000 without adding help," continued Mr. Cummins. "And since we installed the Model 1200, we've had trouble-free service."

The completely automatic Model 1200 compresses, wraps, tensions, and ties both small and large newspaper bundles with lightweight, high tensile, 18-gauge Round Steel Strapping. This strapping is economical and it holds papers securely. The Pensacola News-Journal Company chose this machine because, like all U. S. Steel Supply installations, it's dependable and it's backed up by always-available, technical service and assistance.

For further information about the advantages of USS Steel Strapping, both round and flat, and the applications of our automatic, semi-automatic, powerized and manually operated tying machines, please send the coupon.

USS TRADEMARK

U. S. Steel Supply Division of United States Steel

U. S. Steel Supply
U. S. Steel Corporation
208 South LaSalle Street
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☐ Please send me a copy of your free Sweet's Catalog Insert
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Company_____

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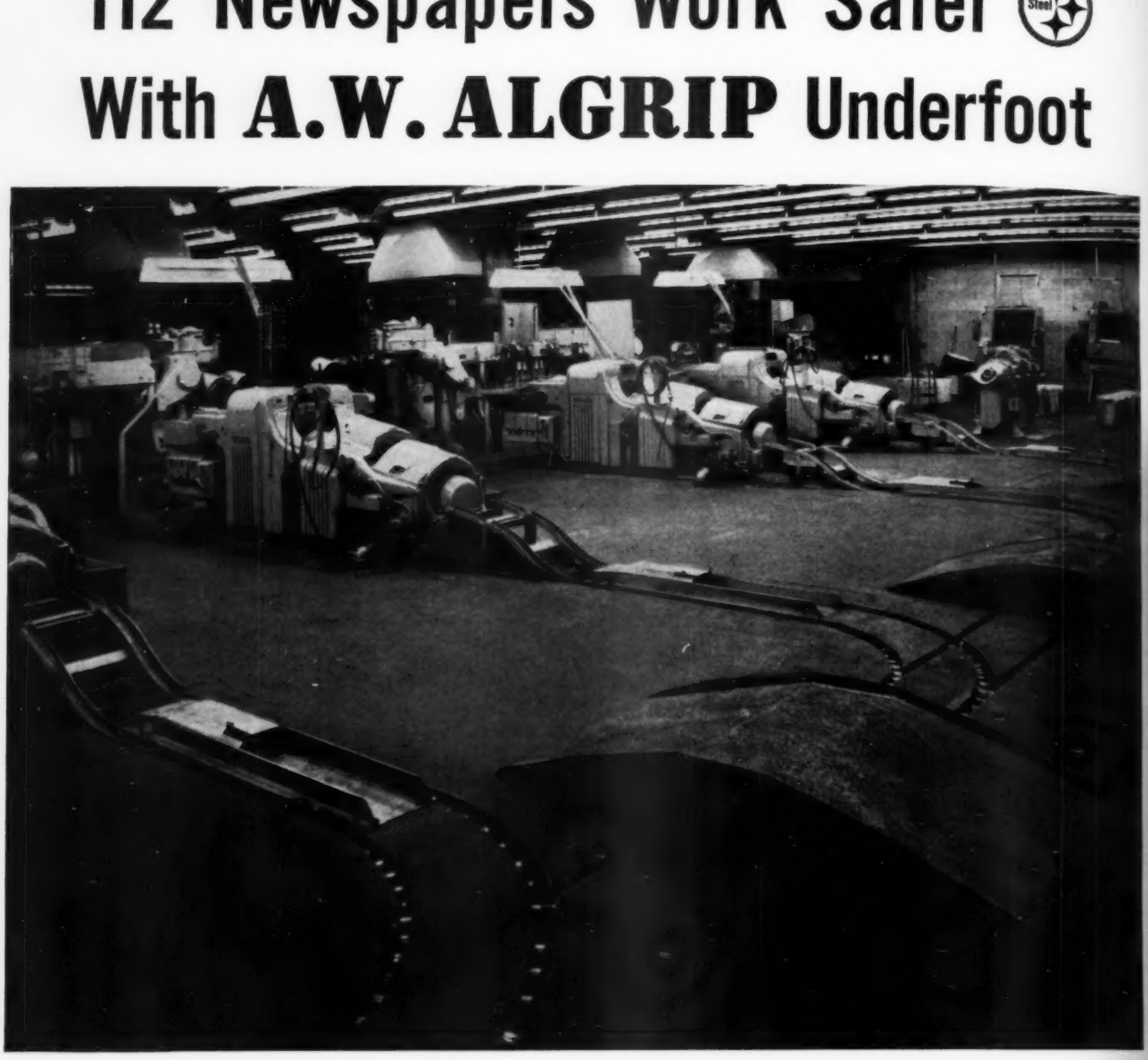
For More Information Circle 205 on Reader Service Card

112 Newspapers Work Safer With A.W. ALGRIP Underfoot



The largest installation of A. W. ALGRIP in any newspaper—24,755 square feet—is in the press and stereo rooms of The Boston Globe. A. W. ALGRIP also has been installed on presses, conveyors and transfer cars.

Dangerous slipping on ink mist and oil in press and stereo rooms is no longer a hazard for many of the leading newspapers in the United States, Canada and Europe.

A total of 112 papers have eliminated this problem by the installation of A. W. ALGRIP flooring.

A. W. ALGRIP is rolled steel floor plate, made by a patented process in which an abrasive is embedded to a controlled depth . . . becoming an integral part of the steel plate, for lasting safety.

Among the many U. S. newspapers protected by A. W. ALGRIP are the *Cleveland Press*, *Detroit Free Press*, *Philadelphia Bulletin*, *Seattle Times*, *Washington Star*, and *Boston Globe*. A complete list is available upon request.

Approved for safety by Underwriters' Laboratories. Write for Bulletin AL-38.

ALAN WOOD STEEL COMPANY

Conshohocken, Pa. • STEEL PRODUCERS WITH THE CUSTOMER IN MIND

DISTRICT OFFICES AND REPRESENTATIVES: Philadelphia • New York • Los Angeles • Boston • Atlanta Cincinnati • Cleveland • Detroit • Houston • Pittsburgh • Richmond • St. Paul • San Francisco • Seattle Montreal, Toronto and Vancouver, Canada—A. C. Leslie & Co. Ltd.

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SCOTT Modern, High-Speed Color-Equipped PRESS UNITS

Available in any number or arrangement of Units

Precision engineered to meet the requirements of any Newspaper

Speeds up to 60,000 PPH, or better

famous 3/2 ratio folder

Color Couples

Color Plate Cylinders

Reversing Drive

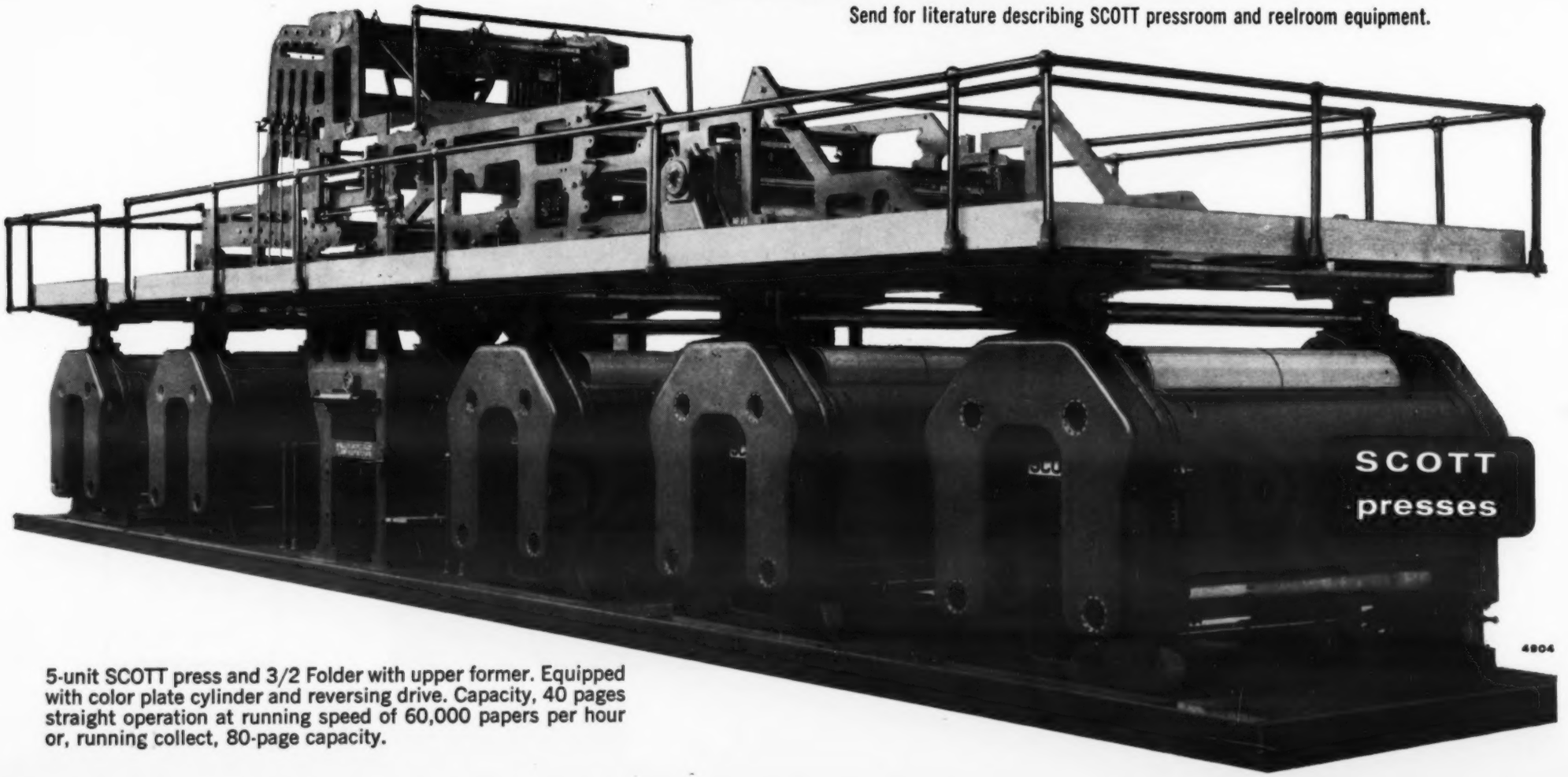
Utmost Flexibility for ROP and Multi-Color Printing

WALTER SCOTT & CO.

EXECUTIVE & SALES OFFICE:
501 FIFTH AVE., NEW YORK 17

DIVISION OF **WOOD NEWSPAPER MACHINERY CORPORATION** Plant: Plainfield, N. J.

Send for literature describing SCOTT pressroom and reelroom equipment.

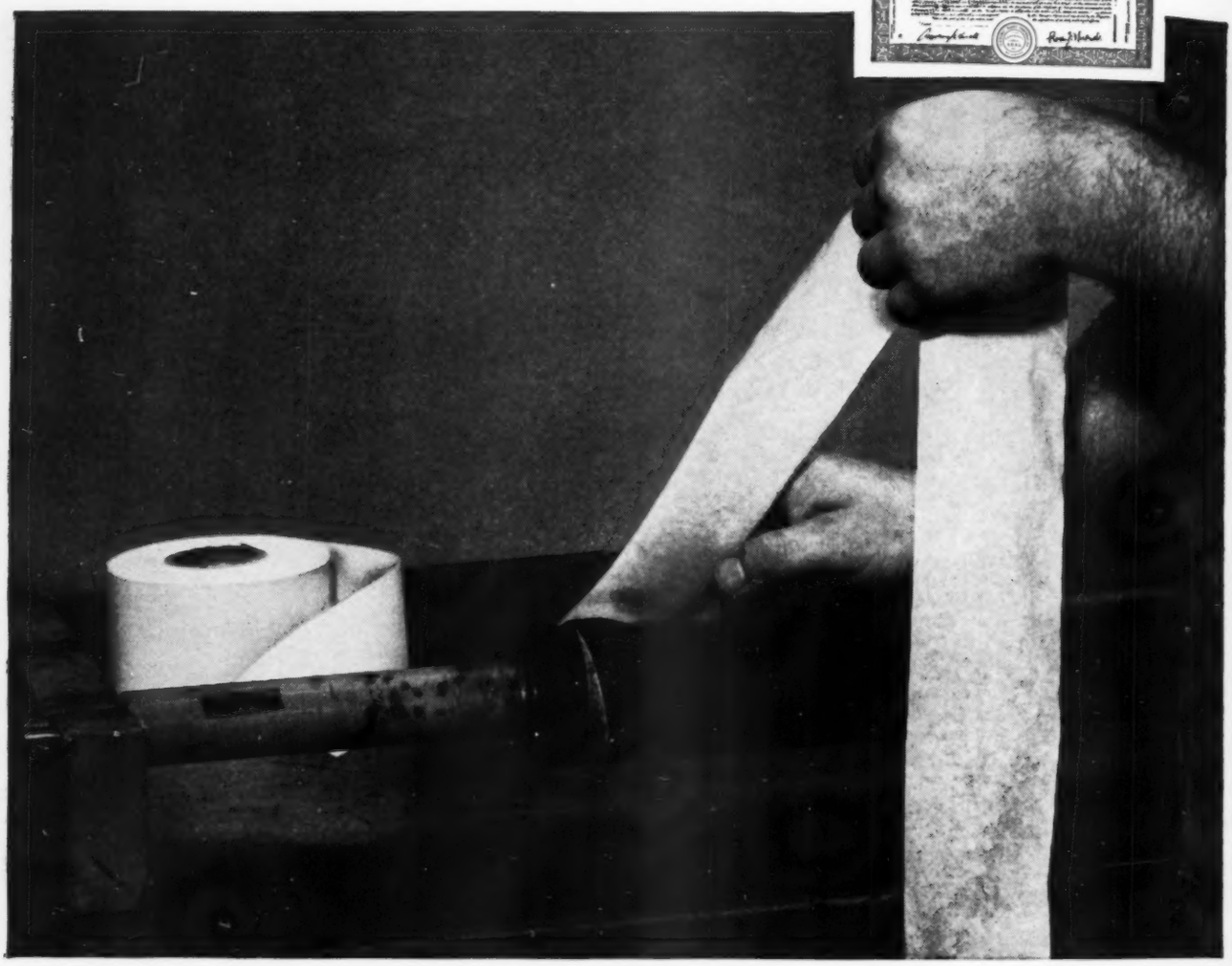


5-unit SCOTT press and 3/2 Folder with upper former. Equipped with color plate cylinder and reversing drive. Capacity, 40 pages straight operation at running speed of 60,000 papers per hour or, running collect, 80-page capacity.

printers . . . lithographers . . .

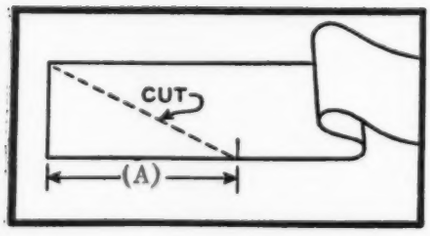
LET'S SWAP IDEAS!

Earn a share of Kimberly-Clark stock!



Stock earner No. 16!

No-ghost wrapping—In wrapping a conventional paper dampener a pressman can eliminate the spiral streak or "ghost" that shows up on some solids by double-wrapping the roller. This method does away with seams, doubles the life of the wrapping and uses only one rubber band.



First, cut wrapper strip 6 ½ times roller length. Next, measure twice the circumference of the roller and mark this measurement on strip as shown (A). From this point, cut across strip on angle to corner. Place angle edge parallel to end of roller (as shown) and, after overlapping first turn, continue wrapping. You automatically achieve a seamless, double-wrapped roller held at opposite end with single rubber band.

Raymond Sorensen, Sanders Printing Corporation. New York, N.Y.

Stock earner No. 17!

Automatic counter—When printing a job that will be cut into smaller sizes for pads of 10, 20 or 25 sheets each, time-consuming hand counting and inaccurate gauging can be eliminated with a numbering machine attached to the press to put a small number in the corner of each large sheet.

E. S. Hershberger, Manager
The Hilton Press, Hilton Hotels, Corp.
Buffalo, New York

Stock earner No. 18!

Housekeeping hint—When re-run time comes around, it's a lot easier to find the needed negatives or positives if you have already stapled the flats together by color and stapled a series of progressive color press sheets along with a finished press sheet onto the group. If you do this when storing the jobs, you could also write the ink used and the order of progression of the colors (1st down, 2nd down, etc.), thereby eliminating much second guessing to say nothing of eye strain.

Thomas E. McGill, Production Manager
Rockwood Press, Inc.
Cincinnati, Ohio

Send us your ideas—You may earn a share of stock. Just write them out clearly and simply, and send to Kimberly-Clark. Pictures or drawings that help explain the idea are welcome. All ideas become the property of Kimberly-Clark. For each idea chosen to appear in subsequent national magazine ads, a share of Kimberly-Clark stock will be awarded to the sender. In case of similar contributions, only the first received will be eligible for the stock. Decisions of the judges are final. A total of thirty-three shares will be awarded.

Don't delay... send yours, today!

Address: Idea Exchange Panel
Dept. No. PP-41
Kimberly-Clark Corp.
Neenah, Wisconsin

Facts about FONTANA by Kimberly-Clark to help printers save time and money!

Quality—Fontana dull coated offset combines the long-run, uniform press performance of "regular offset" with the vivid reproduction and superior ink coverage of a coated stock.

Economy—Fontana provides the same opacity in a 60# weight that an uncoated offset has in a 70# weight—giving you a cost advantage in competitive bidding.

Speed—Fontana is designed for long runs, maximum uniformity and ease of drying. Its double-coated surface increases ink mileage, assists drying to reduce press time, speeds folding operations.

Kimberly-Clark's complete line of printing papers includes:

For letterpress:

Hifect enamel Trufect enamel
Multifect enamel Energy coated book

For web offset:

Kimberly web offset enamel Truweb coated offset
Lithoweb coated offset

For offset:

Prentice offset enamel Prentice velvet coated offset
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Kimberly Opaque Metro

SWAP IDEAS WITH YOUR KIMBERLY-CLARK MERCHANT!
Tell him your requirements, and he will help you choose the right paper for the job.

Kimberly-Clark
PRINTING PAPERS

FREE from Kimberly-Clark—
30-page booklet
by Dr. Walter W. Roehr,
"Paper and the Graphic Arts"

KIMBERLY-CLARK CORPORATION, DEPT. NO. PP-41, NEENAH, WISCONSIN
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MY PAPER DISTRIBUTOR IS_____

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"NCR Paper more than repays its cost... a highly profitable investment."

—BROWN & WILLIAMSON TOBACCO CORP., *Louisville, Kentucky*

"Cleanliness is the attribute of NCR Paper (No Carbon Required) that we prize highly here at Brown & Williamson Tobacco Corporation.

"Our employees in the Accounts Payable section, who used to wear smocks to protect their clothing, now dress like other people in the office. Their hands are no longer blue and their morale is high.

"NCR Paper also has speeded up our operation. With NCR Paper, we pick up originals and copies as a complete unit without having to insert or remove carbons.

"It is difficult to determine how much the improved operations save us in terms of dollars but if we were not saving one dollar (which is not the case) I still would give NCR Paper my full approval.

"It's clean, it's speedier, it's easy to use. But above all it makes for happier and therefore more efficient employees.

"Our experience convinces us that NCR Paper more than repays its cost ... making it a highly profitable investment."

W. D. Whitaker, Treasurer
Brown & Williamson Tobacco Corporation

NCR PAPER ELIMINATES CARBON PAPER

ASK YOUR LOCAL PRINTER OR FORMS SUPPLIER ABOUT NCR PAPER

ANOTHER MONEY-SAVING PRODUCT OF

THE NATIONAL CASH REGISTER COMPANY, Dayton 9, Ohio

1039 OFFICES IN 121 COUNTRIES • 77 YEARS OF HELPING BUSINESS SAVE MONEY

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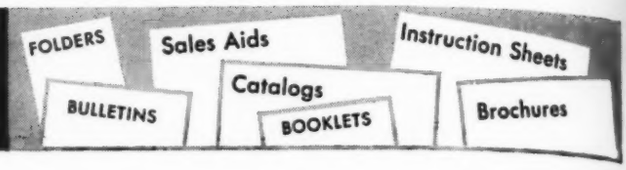
MAYBE A WRAP BUT NO RUIN, WITH AUTOMATIC CLUTCH

Colormatic* by Hoe reduces the possibility of web breakage to an absolute minimum. But when it does occur, nothing very aggravating can possibly happen. The Hoe overload release clutch goes into action instantaneously and automatically. The press stops. The clutch is re-set simply by inserting a wrench in an exterior socket, and turning it 180°. There is nothing to fix, repair or replace. This automatic overload protection is just one of many major features of Hoe Colormatic. Look and listen for yourself. Your eyes and ears will report that Hoe builds a bit of tomorrow into today's equipment. Look to Hoe for progress in printing. R. Hoe & Co., Inc., 910 East 138th Street, New York 54, New York.

HOE

*TRADEMARK

HELPFUL LITERATURE



Circle Numbers on Reader Service Card in This Issue

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. PRINTING PRODUCTION will forward your request.

Composing Room

CALEDONIA BOLD HEADLINES

The advantages of Caledonia Bold type are displayed in a new folder issued by Mergenthaler Linotype Co. Shown is a schedule of 45 headlines, all keyboarded from four fonts of matrices. Caledonia is a Transitional Roman face which combines the features of Old Style faces with those of Modern Roman. CIRCLE No. 314 ON READER SERVICE CARD.

FRONT LOCK ADJUSTMENT

A two page bulletin in which is discussed front lockup adjustment has been issued by Rich & McLean, Inc. The bulletin is directed to Linotype and Intertype operators and machinists. CIRCLE No. 312 ON READER SERVICE CARD.

Platemaking

OFFSET PLATE IMAGER

Literature concerning the Photoplax Camera-Processor from A. B. Dick Co. contains an outlined description of the functions which the product will perform. The Photoplax is said to provide a way to image aluminum offset plates under ordinary room lighting conditions. The product is an integrated platemaking processor, including process camera, that eliminates film negatives and darkrooms. It contains its own supply of negative paper and occupies less than 22 sq. ft. of floor space. It is reported to enlarge 200% and reduce 50%. CIRCLE No. 320 ON READER SERVICE CARD.

STRIPPING TABLE DATA

Complete information on nuArc stripping tables is available in Bulletin N375PP from nuArc Company, Inc. nuArc now offers nine tables in the Jet Line series. Table sizes are 24 in. by 31 in., 31 in. by 41 in. and 43 in. by 52 in. They are equipped with either horizontal or vertical straight edges. CIRCLE No. 325 ON READER SERVICE CARD.

ESTAR BASE FILMS

Eastman Kodak Co. has issued literature on four new Estar base films for use in the Graphic Arts. Separation negative film, type 1 and type 2; 33 positive film and blue sensitive masking film are the four products described in the brochure. CIRCLE No. 324 ON READER SERVICE CARD.

TWO COLOR PROOF PRESS

Literature, in which the features of the Fox River two color proof press are described, has been released by Fox River Tool Co., Inc. The press is shown with its component parts exposed. A brief description of each feature and characteristic of the press is included. Distributor is the Printing Plate Supply Co. CIRCLE No. 308 ON READER SERVICE CARD.

RESIST FOR PRINTED CIRCUITS

Information on Resist-Etch, a new etch resist for printed circuits, is contained in a four page technical booklet offered by Meaker Company, Sub. of Sel-Rex Corp. The solution is said to block off unwanted electroplate and permit pattern lines 0.005 in. wide and 0.005 in. apart. It is recommended for general etching and anodizing applications. CIRCLE No. 318 ON READER SERVICE CARD.

Pressroom

HARRIS WRAP-AROUND PRESS

Specifications for the 23 in. by 30 in. Harris wrap-around rotary letterpress have been released in a black and metallic gold illustrated specification sheet. The sheet was printed on a model of the single color letterpress. Printing, feeding register, inking system, available optional equipment and other general features of the press are described in the literature from Harris-Seybold Co., Div. of Harris-Intertype Corp. CIRCLE No. 307 ON READER SERVICE CARD.

OFFSET BLANKET SELECTOR

An offset blanket selector is now available from Vulcan Division, Reeves Brothers, Inc. The 9 in. by 4½ in. selector is made of two sheets of coated cardboard with a pull chart between them. One side of the selector contains suggestions for matching the proper blanket with a specific printing job. Causes of roller and production problems are dealt with on the other side. CIRCLE No. 310 ON READER SERVICE CARD.

SUPER JET JOB PRESS

The Model JP-10 and Model JP-1 Super Jet presses are illustrated and described in folders obtainable from Halm Industries Co., Inc. The presses are suitable for printing envelopes, tabulating cards, tags and other card stock at speeds of 30,000 to 60,000 i.p.h. CIRCLE No. 321 ON READER SERVICE CARD.

ANTI-OFFSET AGENT

Anchor Chemical Co. offers a folder illustrating and describing additional uses for Repelzit, an anti-smudging and offset agent. The chemical is nonflammable and is said to be suited for use on printing presses, molding presses, cutters and fountains. Reportedly, the product reduces ink pickup and buildup on impression and transfer cylinders, and saves washup time. CIRCLE No. 315 ON READER SERVICE CARD.

Bindery-Mailroom

FLOOR MODEL COLLATORS

Thomas Collators Inc., announces the availability of literature in which the redesigned 8, 10 and 16 sheet semi-automatic floor model collators are described. The collators now provide accommodations for sheet sizes from 4 in. by 5 in. to 17 in. by 22 in. Design improvements include sheet separators, unit-formed feeding arms, a four-digit counter and a new flip-top housing. CIRCLE No. 323 ON READER CARD.

continued on page 115

WEB OFFSET

NEWSPAPERS . .
SUPPLEMENTS . .
MAGAZINES . .
CATALOGS . .
DIRECTORIES . .
BUSINESS FORMS . .
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VERSATILE NEW GIANT

Great Northern makes the thrifty groundwood papers it needs to grow on

In less than a dozen years web offset has turned one of the oldest printing processes into a versatile new giant. Even more significant is the potential . . . which may well amount to a twenty percent growth in each of the next few years. Such are the strides of a giant.

At Great Northern this pace is being met by the combined forces of Research, Engineering, Manufacturing and Sales. A special *Web Offset Committee* is in operation to handle the industry's ever-growing, ever-changing demands on paper for:

- **high opacity with low basis weight**
- **excellent reproduction in monotone and color**
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- **minimum linting and piling**

This continuing effort has led to three major grades, within a wide range of basis weights from 25 to 60 pounds:

OFFSET NEWS
PUBLICATION PRINTING – 0
JET PRINTING – 0

But find out for yourself. Let us send you samples of actual jobs on Great Northern groundwood offset papers. Better still, phone any of our five offices and let us plan your next job with you.

A Leading U.S. Producer of Groundwood Printing Papers

GREAT NORTHERN
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Mills in Maine

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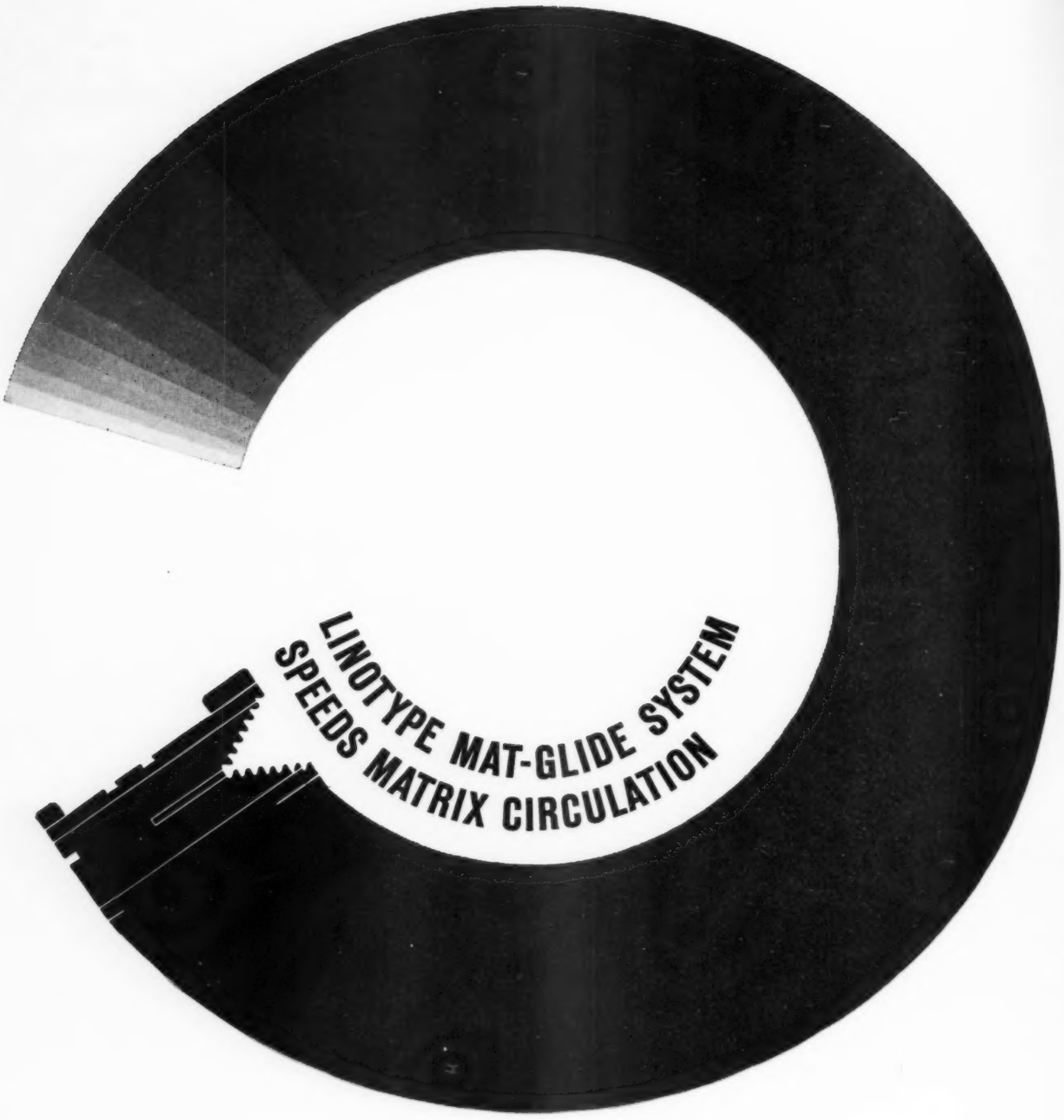

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PRINTING PRODUCTION

The Changing Times Nudge Letterpress

It was only by coincidence that I happened to be on the press erection floor of the Miehle Company on a momentous day last month. There was the last of Miehle's flatbed cylinder letterpresses being erected—the company having reached a decision to discontinue such presses with the exception of the popular Vertical press. A few feet away, in the final erection stage, was the company's first web offset press.

Here was an ending and a beginning; a reflection of the changes that have occurred in press manufacturing in a comparatively short time. A review of the more significant developments show the fast moving pace which printers themselves have established for the industry in the past decade.

One of the big areas of change is toward web offset. Established letterpress manufacturers (ATF, Cottrell, Goss, Hoe, Miehle, Miller) have swung to the lithographic process with a variety of web presses. An unexpected addition to the field is Fairchild Camera and Instrument Corp., a new entry in the press manufacturing business.

Sheetfed offset press lines have also been expanded. In a ten year span, two manufacturers have doubled and tripled their range of sizes. There has also been an increase in foreign press manufacturing activity which is now noticeable in this country.

Even the casual observer has to admit that letterpress is being nudged by all the activity in the press industry. But as one spokesman has put it: Letterpress is far from being dead.

The wrap-around presses are coming! They will take charge in many areas vacated by the flatbed cylinder press. Harris, Heidelberg and Miehle now offer presses (or soon will) for this new printing technique.

Among other significant changes are: More activity in the rotary letterpress lines; Mergenthaler Linotype entering the press field; Heidelberg's development of a litho-letterpress and expansion of its cylinder press sizes.

The changing times provoke reminiscence, but should also make printers investigate the new with open minds. In addition, this review of a decade of changes in the press field refutes the sometimes repeated charge that the manufacturers are not offering anything new. Their market analysts and engineers are pursuing trends with a scientific determination to keep printing ahead on every front.—E. H. O.

The Printers of the World

Their Importance
Their Advancements
Their Future

World renowned Graphic Arts technologist expresses his views on the present state of printing in an exclusive report direct from Paris

By VICTOR LETOUZEY

Graphic Arts Consultant
Bourg-La-Reine, France.

THE future of printing throughout the world is of personal concern to all who depend upon the industry for their livelihood. These are the printers themselves, their suppliers and others engaged in the trades connected with the Graphic Arts industry. In itself, printing holds a dominant place in the cultural and economic life of large and small countries.

By definition, printed matter is a means for transmitting information; it is a means of contact between the writer and the reader; it is also a means for spreading knowledge among a wide variety of human beings throughout the world.

Printed matter may be retained permanently and can be referred to at any future time. When required, printed matter can be produced and distributed without limit in terms of place or quantity. Irrespective as to whether it is produced in a hundred or several million copies, all of the printed pieces are alike.

Printing's role increases in importance as a country's public education system and its prosperity advance. To these factors which make for expanded use of printed matter, we may add the ever increasing populations of the world.

[A few examples of latest population increases are as follows: China in 7 yrs., over 86 million; France in 5 yrs., over 2.5 million; India in 8 yrs., almost 46 million; United States in 10 yrs., 30.3 million.]

Competition With Printing

From time to time, the printing industry has been apprehensive about the increasing competition of other forms of information transmission. These are by radio, television, records, tape recordings, cinematography and other means. In fact, these competing media have reduced slightly the use of certain types of printed matter. At the same time, however, their promoters have made powerful contributions to the development of many new types of printed matter.

EDITOR'S NOTE: *The italic paragraphs are supporting information furnished by the editors of* PRINTING PRODUCTION MAGAZINE.

[Latest information about global communications to come to our attention is that space satellites will enable U. S. publishers to reproduce type facsimiles of newspapers and other printed matter at any point on the globe in a matter of minutes. See PRINTING PRODUCTION, *Jan. 1961, page 53.]*

Large Volume—Low Cost

Other than development of some presently unknown invention, the use of printed matter will expand and its application will be multiplied.

These developments, however, will be less spectacular in countries whose languages are expressed with a large number of signs, ideograms or complicated characters. The latter apply to the peoples numerically small in number with a civilization and economy still in a relatively backward stage. Printed matter must be produced at a low cost if it is to be distributed widely.

[Notable example is the increasing publication of millions of the economical paperback type of book in many countries and languages. These consist of classical, scientific and popular works.]

Progress Resistance Passes

The printing and allied industries often have been criticized for resistance to progress. This resistance has been attributed to conservatism in technical matters and a tendency to be content with empirical methods. Let us hasten to say that during the past few years a marked reaction against this attitude has occurred practically everywhere in the world.

New printing processes have taken their place in world markets. The traditional letterpress method is meeting with increasingly keen competition from lithography, gravure, flexography, xerography and the screen process.

The majority of us needed a lot of time to realize that letterpress was heavy, slow, cumbersome, complicated and expensive.

Thanks to American initiative, we have seen the appearance of type composing machines which use no metal, powderless photoengraving etching machines on which can be produced thin printing plates to replace the heavy forms, color determining instruments, and newer and faster rotary letterpress presses. Let us also mention presensitized plates, photopolymer plates, xerography and many other recent inventions.

This successful technological evolution of the Graphic Arts industries provides all of us with offensive production weapons in producing printed matter. This printed matter will become more attractive as color printing is more widely used.

Included in the world wide printing industry are a relatively small number of large concerns, some average size concerns and a large percentage of smaller plants employing fewer than 25 people.

This aggregate of printing plants is advantageous from a geographical distribution of production potential. But it is, to a certain extent, open to criticism from the standpoint of economy and efficiency.

Up to the present time, there have been relatively few attempts to group concerns under one management in the printing industry or to establish an enterprise with several branches in any part of the world.

Generally speaking, the financial, technical and administrative facilities of the small and medium size firms are relatively inadequate. It should be noted that before all else, the managements of these firms prefer to feel independent and to enjoy the freedom of initiative.

[In many cases, smaller plant managements may feel independent. But this dominant feeling of "independence," unless resisted, also tends to inhibit proper use of working capital, creates temptation to over-extend credit, and weakens desire to delegate authority among likely employees. (See Busy Boss, PRINTING PRODUCTION, *March 1961, page 84.)]*

Technological Progress

Technical progress is one of the major conditions influencing the expansion of printing. It increases both production and sales potential. Viewed from this standpoint, things are moving in the right way as far as the future of the Graphic Arts industries is concerned. Research centers have been set up in many countries.

Suppliers have made liberal grants to their design and planning departments. They have not hesitated to devote large investments to the construction of new items of equipment or to produce raw materials the quality of which is better suited to present day needs. Corporations, which until fairly recent times had shown little interest in the Graphic Arts, have now taken their place among its suppliers.

[Among these firms in America may be mentioned: Radio Corp. of America, Fairchild Camera & Instrument Corp., Dayton Industrial Products Co., Minnesota Mining & Mfg. Co., and E. I. du Pont de Nemours & Co.]

Educational Gains

In addition, great effort has been made in connection with technical training. This has been done to raise the level of professional knowledge and to insure an adequate supply of skilled workers.

Here again, it has been realized that the future of the printing trade depends on the quality of the men engaged. This applies to bosses, key staff members, and rank and file workers. Another new element which is full of promise is the increasing contact that is being built up on the international plane between the Graphic Arts industries of the five continents.

This conception of the future of printing in the world is based on common sense objective observations that we have been able to make. As a result, we are convinced that printing is faced with a future which will be all the more favorable if it is capable of keeping ahead of the demands that will be made upon it.

The letterpress process must rapidly become less burdensome, faster and simpler; lithography and gravure must reduce their hazards which are still too many in number and too costly. Color reproduction developers must fashion methods which are more effective than present ones. Life is not static—it's not a fixed condition. Likewise, a technique is never lastingly final.

External and internal conditions both augur a favorable future for printing, provided it is able to profit by the elements which are actively tending to support its interests. ⊕

By GYAN P. MADAN, *Color Analyst*

A Detailed Report on WIPE-ON Litho Plates

What they are and how they are handled

SINCE wipe-on lithographic plates were introduced several years ago, they have gained popularity in large and small litho plants. The plates are used on single and multicolor sheetfed presses, as well as on high speed multicolor webfed presses. To judge from the high quality of single and multicolor work produced from these plates, it seems they are heading for close competition with presensitized plates.

The wipe-on litho plate is a fine grained plate, the surface of which is chemically treated by the manufacturer. In the lithographic platemaking plant, the diazo type of light sensitive coating is applied by the rub-on or wipe-on method. Usually, the plate is coated just before processing.

The immediate forerunner of the wipe-on plate is the presensitized plate with its diazo type of coating. This diazo type coating was invented by German chemists working for Kalle & Co., a subsidiary of the German I.G. Farben A.G.

The diazos are obtained from aromatic nitrogen by-products of coal tar and are related to the aniline dyes. They are light-sensitive, and their light decomposition products may either harden colloids similar to bichromates or form by themselves hard insoluble films.

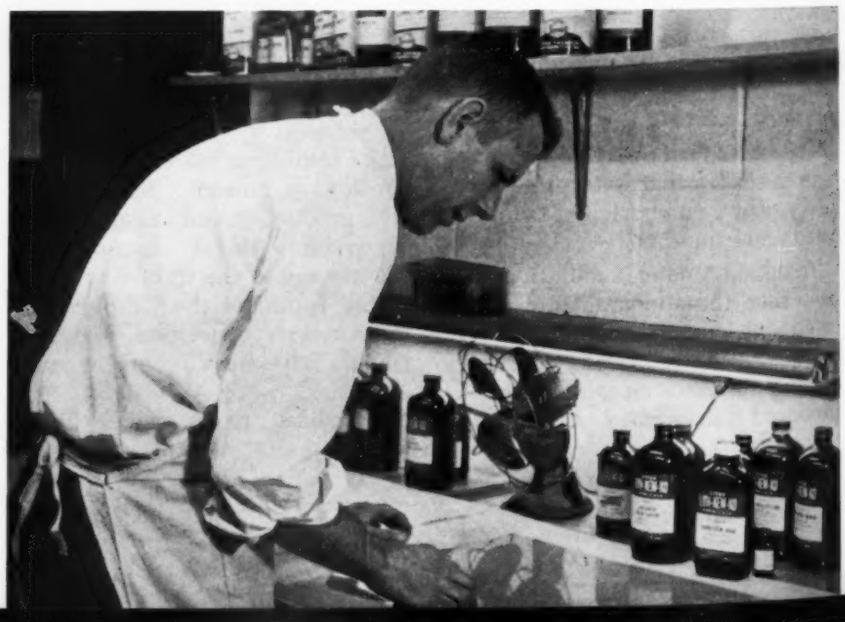
This diazo type coating recently has led to the introduction of a new kind of litho plate called wipe-on. Many people claim credit for the invention of the wipe-on plate. However, it is not clearly known who was the actual originator.

According to one source, four years prior to the marketing of the presently used diazo coated wipe-on plates experiments were conducted with bichromate colloid for rub-on techniques. The MRX plate, marketed by Printing Developments, Inc., and originated by William Frangos, is the only one of this type available at present. Others believe some organizations were experimenting with diazo type wipe-on plates as early as 1950.

The men and organizations which, so far as known, deserve credit for origin and development of diazo coated wipe-on plates are Elmer Deal and Herbert C. Wenske, original owners of Lithoplate, Inc., and the Alum-O-Lith Plate before Lithoplate, Inc. was sold to Harris-Intertype Corp.; Joe Ullrich and Sumner Williams of Sumner Williams Co.; Litho Chemical Supply Co., and the U.S. Army Map Service. Sumner Williams Co., however, was the first to commercialize these plates which soon won acceptance. They have been named ST plates and are marketed by Harold M. Pitman Co.

Several makes of wipe-on plates are available. A list of such plates

Wipe-on litho plate is fine grained and chemically coated. Before use, platemaker applies and then smooths out diazo light sensitive coating with paper applicator.



and their sources, compiled to the best of our knowledge, is shown in Table I on next page.

Fine and Smooth Grain a Must

All of the plates listed in Table I are aluminum. All require a sensitizing coating by wipe-on methods. But before the sensitizing coating can be applied, the bare metal is grained and chemically surface-treated or pretreated. A very fine and smooth grain is needed on these plates. Since this grain cannot be obtained by the conventional tub graining procedure, it is produced by several other methods.

The ST process plates are grained by sand blasting and all others by dry steel brushes or by wet brushes using pumice powder plus a detergent. Some firms have also marketed fine ball grained plates recently.

Hot silicate treatment, anodization or any other available method can be used to pretreat the aluminum plate. This pretreatment is given to passivate the aluminum metal, so that it will not oxidize. The film of oxide formed by this chemical process helps to run the plate clean on the press. This chemical treatment is also considered as a substratum for the diazo coating. The smooth surface thus formed insures an accurate reproduction.

Like the presensitized plate, normal care is exercised in handling a wipe-on plate since dirt, scratches, finger prints and foreign material will impair the printing surface.

Unlike the presensitized plate, a wipe-on plate is supplied in its pretreated stage and can be unwrapped under normal room light. After the sensitized coating has been applied to it by rub-on or wipe-on methods, however, it should be handled under a dim yellow or a subdued light.

Coating Wipe-on Plate

After the plates have been grained and chemically pretreated, they are made light sensitive by wiping a diazo compound coating upon them. The coating is supplied in dry form with a separate container of solvent. Originally it had been introduced in liquid form. But it was soon discovered that it lacked stability and had a brief two-week shelf life. Consequently, it had to be converted into a powdered diazo with long shelf life which could be dissolved in the solvent immediately before use.

The powder is manufactured by several chemical companies most of whom follow in general the original German method. The liquid part of the coating is a suitable solvent for the diazo powder together with stabilizers, preservatives, etc. The basic difference in all proprietary coatings is found in the liquid part of the coating.

To prepare the coating, the powder is mixed with the liquid according to specified directions on the container supplied by the manufacturer. In general, it is one part powder to one part liquid. The coating should be mixed until all the tiny particles are fully dissolved. Once thoroughly mixed it may be used almost immediately, but sometimes it is better to allow the coating to set overnight.

The mixed coating is applied to a pretreated plate under a subdued or yellow light. A small amount of it is poured into the center of the plate and wiped down evenly with a lint-free paper applicator.

The line-free paper applicators on the market are known as wipes and are available under such trade names as ST wipes, Webril wipes, Litho wipes, etc. These wipes come in the form of pads, and each pad is made of four sections of wipes which are closely woven.

The coating is wiped first across the grain of the plate, then with the

WIPE-ON LITHO PLATE RATINGS

Advantages

Wipe-on plates, which seem to offer more practical application than presensitized plates, can be summarized as follows:

(1) All brands of wipe-on plates are comparatively simpler to process than presensitized plates.

(2) Wipe-on plates are about two-thirds the cost of a one side presensitized plate.

(3) All wipe-on plates, under most conditions, yield many more impressions than the presensitized plates. The number of impressions of these plates, as a rule, ranges between 25,000 to 50,000. Some plants report impressions exceeding 100,000.

(4) Wipe-on plates are available in all sizes and thicknesses.

(5) These plates present less difficulty with out-of-contact areas when poorly stripped flats are used.

(6) There is no shelf life problem with wipe-on plates. The coating, however, must be used within two weeks after it has been mixed. The uncoated plates have an unlimited shelf life compared to the six months shelf life of most presensitized plates.

(7) Halftones and solids reproduce more accurately from wipe-on plates than from presensitized plates.

Disadvantages

Like any other product, wipe-on plates have some disadvantages, too. Compared to presensitized plates they are:

(1) Coating of wipe-on plates involves extra plate-making time.

(2) Coated wipe-on plates have a much shorter shelf life than presensitized plates. On an average it ranges between 8 hrs. and 2 days at the most after coating.

(3) Compared with the two sided presensitized plates, wipe-on plates allow only the use of one side.

(4) Occasionally some impurities are found in the metal used for wipe-on plates which cause numerous unexplained troubles, such as localized scum, blinding, etc.

(5) Wipe-on plates have more processing and other variables than presensitized plates.

(6) Some brands of wipe-on plates scratch very easily during handling. This is due to their smoother and softer surfaces as compared to competitive types. Their manufacturers, however, claim these scratches do not show in the print unless they are below the layer of the surface treatment.

TABLE I—Types of wipe-on plates using diazo-coating

Trade Name	Manufacturer		Supplier
	Plates	Chemicals	
ST Plate	Sumner Williams, Inc.	Harold M. Pitman Co.	Harold M. Pitman Co.
Agategrain	American Graded Sand Co.	American Graded Sand Co.	American Graded Sand Co.
Wipo	John Stark Laboratories	Litho Chemical & Supply Co.	Litho Chemical & Supply Co.
Durolith and KG	Capital Regraining Corp.	Durolith Co.	Durolith Co.
Velvet Grain	Western Litho Plate & Supply Co.	Western Litho Plate & Supply Co.	Western Litho Plate & Supply Co.
Premcote	Premier Graining Co., Inc.	Premier Graining Co., Inc.	Premier Graining Co., Inc.
Instaplate	Not Known	Sinclair & Valentine Co.	Sinclair & Valentine Co.
Blue Satin	Chicago Litho Plate Graining Co., Inc.	Chicago Litho Plate Graining Co., Inc.	Chicago Litho Plate Graining Co., Inc.
Eezy-Kote	Commercial Litho Plate Graining, Ltd., Montreal, Can.	Com.-Litho. Chemicals Ltd., Montreal, Can.	Commercial Litho Plate Graining, Ltd., Montreal, Can. (Not available in U.S.)
MRX	Printing Developments, Inc.	(MRX plate does not carry diazo type coating)	Most supply houses

grain. After coating, the wipe is discarded and the plate is fan dried for about 1 min.

Exposing Wipe-on Plate

Wipe-on plates are exposed approximately the same length of time as presensitized plates. Over exposure of these plates usually produces no negative effect, but sometimes may result in undercutting the image. Under exposure, on the other hand, results in a weak gray image and causes pinholes in solids when developed. Under exposure may also shorten the press running life of the plate. Standardization of exposure therefore, is very important for the optimum performance of wipe-on plates.

In Table II is shown a suggested example of the exposure time, but it should be carefully checked with the 21 step LTF gray scale for individual plant conditions. A properly exposed plate will produce a solid step 8 on the LTF gray scale.

If the exposure shown in Table II produces a solid step less than 8, the exposure should be increased according to the chart in Table III.

On the other hand, if the increased exposure time (Table III) produces a solid step more than 8, the exposure should be decreased according to the chart in Table IV.

After exposure the plate is processed. The original technique used to process an exposed wipe-on plate consisted in applying first some greasy developing ink with some absorbent cotton. This was followed by development with an acidified gum arabic solution.

Although this technique is still used by some platemakers, particularly in processing ST plates, the trend in general today is to use a one step developer and sensitizer.

The one step solution is known as lacquer emulsion. It is supplied by all major manufacturers of the wipe-on plates and of the chemicals under different trade names. They are all basically resin-in-water emulsions. The water phase contains an acid, gum arabic, and a wetting agent. The lacquer phase contains a lacquer resin and a solvent to dissolve this resin. During processing, the water phase of the lacquer emulsion removes the unexposed diazo coating and desensitizes the non-printing areas. The lacquer phase deposits the lacquer resin on the exposed diazo image.

To apply the one step lacquer emulsion, the plate is removed from the vacuum frame and is taped on top of the work table covered with clean paper. Approximately ½ oz. of the solution is poured into the center of the plate. Using any of the available wipe pads it is wiped over

continued on page 116

TABLE II—Example for Exposure Time

Negative	Normal contrast
Light source	140 amp. single carbon arc
Distance of light source from printing frame	40 In.
Exposure time	50 Units (Essar light-integrating meter)

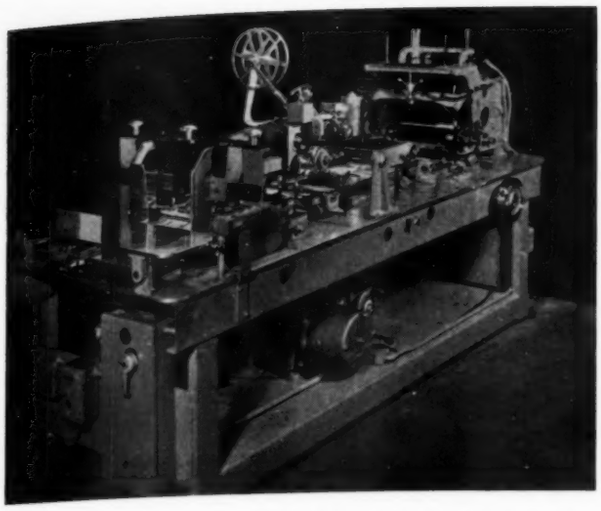
TABLE III—Chart for Increased Exposure Time

	Steps on LTF Gray Scale				
To increase	1	2	3	4	5
Multiply the original exposure time by	1½	2	3	4	5

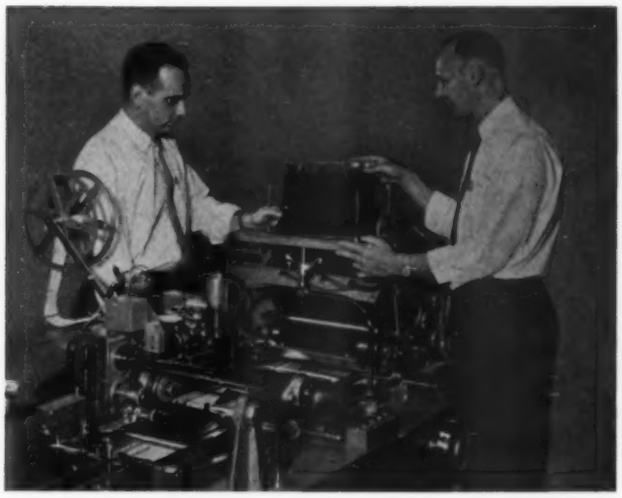
TABLE IV—Chart for Decreased Exposure Time

	Steps on LTF Gray Scale		
To decrease	1	2	3
Divide the original exposure time by	1½	2	3

The light sensitive coating is applied to Wipe-On litho plates under subdued yellow light. Plates are exposed approximately the same length of time as presensitized plates. A small amount is poured in the center of the plate and is then wiped over the plate evenly with a paper applicator.



Automatic catalog imprinting and/or mail labeling machine built for Kable Printing, Mount Morris, Ill., by Cheshire, Inc.



Kable Printing Co. engineers Leonard Ault (left) and Duane Claussen stack imprinting plates on the machine's platform.

Robot-like Device Imprints And Labels Catalogs Fast

THE shortening of time required to perform certain operations related to the printing industry continues. This is being accomplished in many instances through development of robot-like equipment.

One of the latest of these is an automatic machine which simultaneously imprints a dealer's name and address and applies an address label to catalogs for mailing to the dealer's customers. Then the machine will automatically change over to imprint the next dealer's name and apply address labels to the catalogs which will be mailed to his customers.

To illustrate the need for and function of such equipment, suppose that one of your customers is a manufacturer. This manufacturer is publishing thousands of copies of his catalog addressed and mailed to prospects and customers in a number of cities throughout the United States. Consequently, the dealer's name and address must be imprinted on each of the catalogs together with an individual address label for mailing to people in the dealer's city.

Formerly, this meant that each different dealer's imprint required a corresponding press stop and plate change. In addition, it was necessary to be careful in manual handling of the catalogs between the imprinting and labeling operations so that mailing addresses would coincide with dealer imprints. For example, so that the ABC Company of Los Angeles would not receive a catalog imprinted with the name of a dealer in Detroit.

Machine Did Not Exist

In 1957, Kable Printing Co., Mount Morris, Ill., faced this addressing and imprinting dilemma. Kable management decided that the company could no longer meet the growing need for this type of mailing service with existing methods. It was agreed that a single machine which could address and print simultaneously was needed urgently —but no such machine existed. It had to be designed and built.

For this purpose, Kable's engineering department was delegated to look into the creation of this type of machine. Under the direction of Leonard Ault, the engineering department set out to analyze the company's needs and to determine general specifications for a machine to handle these needs successfully.

When these specifications were determined, representatives of Cheshire, Incorporated, were called in to design and build the machine. For mechanical and electronic research, Cheshire designers drew upon the facilities of Armour Research Foundation of the Illinois Institute of Technology.

First Labeler-Imprinter

Then began a series of meetings among these and other representatives of the three organizations now at work on the project. Through these meetings was developed an exchange of information, ideas, study and experiments which led to the construction of the first labeling and imprinting machine some two years later.

The machine is a composite of electrical and mechanical ingenuity. The head which applies the labels to the printed piece is of the universal type which will handle any style of address label strip. A code mark on the label strip provides intelligence for actuating the imprinting unit.

Production Speeds

Gross operating speed of the machine is up to 14,000 printed pieces per hr. This applies to both bulk imprinting as well as simultaneous imprinting and labeling of printed pieces. However, net production per hour is governed by the number of bulk imprinted copies and label

continued on page 119

Two Teams Settle on Web Offset to Print Weekly *Grit*

Color flexibility, high printing speeds and paper reduction major deciding factors

THE recent decision of Williamsport (Pa.) *Grit* management executives to change from stereotype letterpress to the web offset printing process has stirred considerable interest.

Incidental to the announcement, George R. Lamade, president of Grit Publishing Co., stated that to accomplish the changeover in printing process a new Hoe multicolor webfed offset press has been ordered. It is anticipated the press will be in operation in *Grit's* new plant by April or May 1962. Training of *Grit* mechanical personnel will be supervised by Aller and Hoe technicians. This training will take place both at the Hoe plant during the test running of the new press and also at the *Grit* plant in Williamsport after the press has been put into operation.

The *Grit* will make its own offset printing plates. Announcement has not been made respecting the particular type of plate which will be used. However, it will be one of the more durable types of plates required to withstand long production runs.

This tabloid 79 year old weekly has a circulation ranging between 900,000 and 1,000,000 copies in small towns. The National edition consists of 800,000 copies; the Pennsylvania edition 100,000 and the Williamsport local edition 50,000 copies. At the present time the national and state editions consist of 44-48 tabloid size pages. The local Sunday edition goes as high as 128-136 pages tabloid.

At present, *Grit* is equipped with a double sextuple Hoe press printing from stereotype plates. For the most part the weekly print order can be produced on one press. The second press is used one or two days in a week. Operating on a single shift basis, the presses are run at about 43,000 papers per hr.; they net close to 39,000 papers per hr.

The printing of editions with present equipment begins on Monday to cover the West Coast mail trains; the weekly schedule is completed on Saturday with the printing of the Williamsport or local Sunday edition.

Two Task Teams Appointed

The decision to replace the present printing process was not arrived at quickly. Several years ago, President Lamade appointed two teams from among plant personnel to investigate possibilities.

The first team's task was to investigate the cost, mechanical features and color flexibility of all late design newspaper presses.

The second team's job was to study possibilities of magazine type letterpress, rotogravure and offset as each could be applied in producing *Grit*.

Upon completion of the initial period of investigation, the first team's conclusion was that color reproduction on conventional newsprint was limited to 85 line screen work.

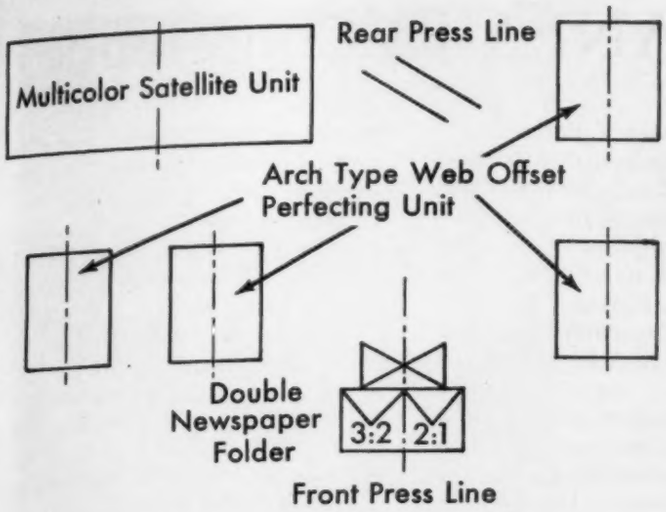


Fig. 1—Plan view of the *Grit's* web offset press arrangement. Press arrangement is in two lines. Rear line contains the satellite unit and one arch type offset unit. Three arch type units are included in front line, each equipped with a color cylinder. Folder is positioned at right angles to the front press line.

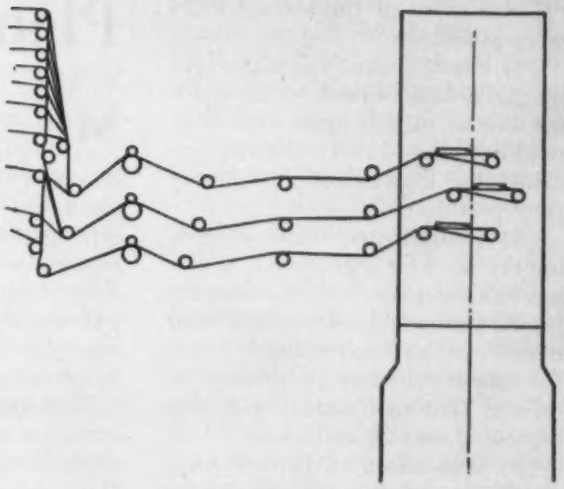


Fig. 2—Diagrammatic end view of the two offset press lines shows crossover plan of three half webs coming from rear side lines. Half webs can be turned by angle bars so that second impression printing can be repositioned into first impression page locations.

Arrangement of Grit's *Web Offset Press Lines*

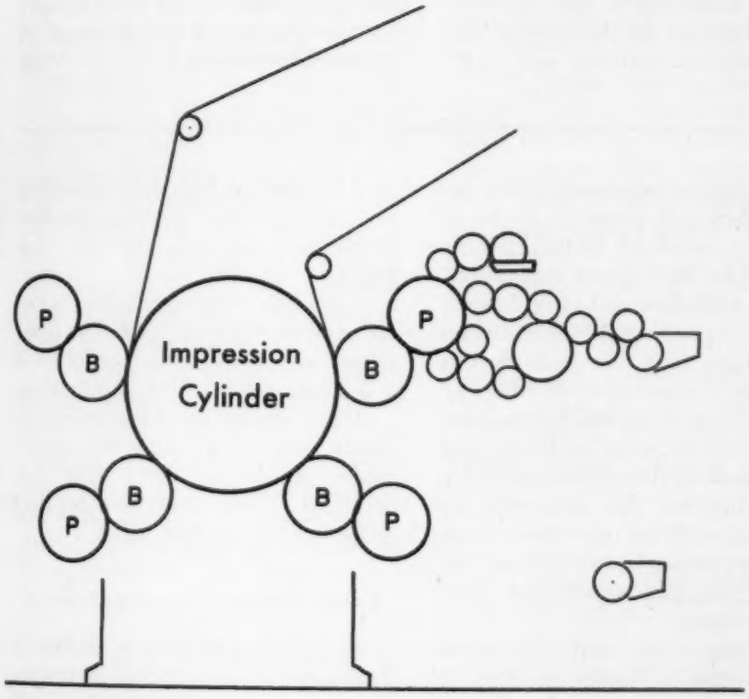


Fig. 3—Cross section diagram of the four color satellite offset press unit. When used with an arch type unit, the satellite unit will print process color on one side of a full web with the perfected black and/or spot color printing done by the arch type unit. Satellite unit prints each broadsheet pages or 16 tabloid pages collect.

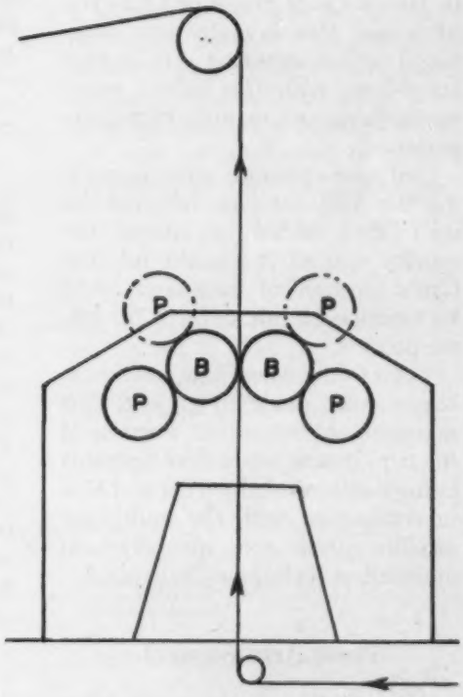


Fig. 4—Cross section diagram of the Hoe arch type web offset press perfecting unit. In this unit there are two plate and two blanket cylinders. Dash circles are color cylinders which can be added later.

Conclusions of the second team were as follows:

(1) Use of electrotype plates on a magazine type of press, while yielding higher quality color reproduction, would not fulfill *Grit's* requirements for high speed and heavy page products.

(2) Rotogravure, while answering the need for high speeds, heavy products and good quality color reproduction, could not be considered because of the time required to etch the copper cylinders. Retraining the present *Grit* mechanical staff also presented serious obstacles.

(3) Web offset, at the time, supplied some of the answers. These were high screen, sharp color, short lead time for plate preparation, etc. But there did not appear to be a press available on which could be handled *Grit's* page and color needs.

After consideration of the teams' reports, further study of the proposed printing process change was continued. About a year and a half ago, some web offset samples printed by Aller Press, Ltd., of Copenhagen, Denmark, were received by the *Grit* management. These samples consisted of spot and multicolor pages printed on 32 lb. North American newsprint. The newsprint had been shipped to Aller Press by R. Hoe & Co. It developed that the Aller and Hoe organizations combined offset printing production know-how with the latter's press engineering and manufacturing experience.

Grit management, after inspecting the Aller samples, felt that the web offset technique offered the quality wanted. It was also felt that Grit's mechanical personnel could be retrained in all steps of the offset process.

Trips to the Aller plant in Copenhagen were made by several *Grit* management executives. Purpose of the trips was to study developments being made jointly by Aller and Hoe in connection with the multicolor satellite press unit specially and other offset techniques in general.

Press Arrangement

After further study, plans were considered for a press arrangement which would suit present production requirements. Design of the press, also, should permit expansion to handle future needs.

The press arrangement finally decided upon will print 72 pages at operating speed of 65,000 papers per hr. The basic press equipment includes a satellite unit (Fig. 3) permitting the printing of four colors on eight pages, plus four arch design web offset perfecting units (Fig. 4) on which can be printed two sides of the web at once in black and white. Each of these four units (by extra cylinders) can also print an additional color on one side of each web. This arrangement makes a total of 32 pages on which spot color can be printed.

Plan view of the web offset press arrangement is shown in Fig. 1. Press arrangement is in two lines. The rear line contains the satellite unit and one arch type offset unit. Included in the front line are three arch type units each equipped with a color cylinder; also included is a nest of turning bars for converting second impression printing into first impression page location or vice versa.

A double newspaper folder is positioned at right angles to the front press line. Included in this folder is a 3:2 and a 2:1 folding mechanism.

This press layout, it is announced, lends itself to printing 64 tabloid pages noncollect from four full webs, or 72 pages tabloid noncollect from four and a half webs.

Press Crossover Arrangement

End view of the two press lines is illustrated in Fig. 2. Outlined is the crossover arrangement of three half webs coming from the rear side line. These three half webs can be turned by angle bars so that second impression printing can be reposi-

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Plan ANPA-RI Conference

MEN, methods and machines will again be the format of the newly christened Production Management Conference of the American Newspaper Publishers Assn. Research Institute to be held at the Palmer House, Chicago, June 5-7. (Previously, the conference was known as the ANPA-RI Mechanical Conference.)

Photocomposition, subject of a special meeting last year, will be included in the formal program of the three day conference. However, on June 8 a special session will be devoted to web offset printing of daily newspapers.

Men will be the topic of the opening session on June 5; methods will be discussed on June 6, and machines on June 7. One major feature of the program will be the equipment show, which will include many of the latest machines, supplies and related products designed for use in newspaper printing plants. In the past, the exhibit has attracted many interested newspapermen in the various cities where the conference has been held. This year's show promises to be one of the best ever.

W. R. Coddington, Detroit *Free Press*, chairman of the ANPA-RI's Mechanical Committee, and A. E. Rosene, St. Paul *Dispatch and Pioneer Press*, vice chairman, have announced some of the conference speakers and topics.

Richard L. Jones, Tulsa (Okla.) *Tribune*, will deliver the keynote address, and Harold Grumhaus, Chicago *Tribune*, will welcome conference participants during the first session. Training of supervisors, responsibilities of employees and management to each other, and arbitration are among the topics to be discussed during that session.

On Tuesday morning, James Lamade, Williamsport (Pa.) *Grit*, will explain why his newspaper has converted to offset. The new building of the London (England) *Mirror* will be described by Jack Holroyd, of the *Mirror*; and Roy W. Prince, director of the ANPA Research Center at Easton, Pa., will report on new developments.

The transition from letterpress to offset by small newspapers will be discussed Tuesday afternoon. Also, on the agenda for Tuesday's session are talks on wire systems, TTS operations, tape perforators, short cuts for partial page color, and production measurement. A variety of talks on new machinery will be given on Wednesday morning.

The RCA Electrofax process has been developed to include photoengraving platemaking in its applications. Here, a technician uses a "charging wand" to make the plate light sensitive by giving it a blanket negative electrostatic charge. The plate is coated with a zinc oxide substance, which acts like an aggregate of tiny capacitors, to contain the charge on the plate.

Optical Print Process Finds Graphic Arts Applications

MANY years of research and development have been invested in the Electrofax optical printing process. The result has been successful commercial and military applications of this process, some of which may find direct Graphic Arts usage.

Electrofax is the name for a Radio Corp. of America development of an optical printing process, utilizing a photoconductive surface. Latest work on this process includes making letterpress and lithographic plates by eliminating the negative film step and reducing exposure time. (See PRINTING PRODUCTION, Feb. 1961, page 42.)

The main ingredient of the Electrofax photoconductive surface is zinc oxide. This surface has the property of being an insulator in the dark and a conductor when illuminated. Even in the presence of light, however, the conductivity is through the surface; there is little lateral leakage across the surface.

Theory of Electrofax

These properties cause the surface to act like a group of element-size, insulated capacitors whose internal resistance may be suddenly and greatly decreased by illumination. An electrostatic charge is thus placed on opposing surfaces of the photoconductive material, and exposure to light causes an internal current to flow, equalizing these charges and removing the charge from the areas of the surface thus exposed.

If the light exposure is an optical image, such as a projected lantern slide, the charge remaining on the dark portions of the image constitutes an electrostatic image of the projected optical image. This electrostatic image may be made instantly visible by bringing tiny black or colored particles of opposite electrostatic charge into contact with the surface. The particles stick to the electrostatic image but not to the exposed portion of the image. The result is a visible, positive reproduction of the projected slide.

The photo-conductive surface is normally applied as a thin coating to a paper base. An electrostatic charge is placed across the surface in the dark. A corona discharge (fine wires at the high negative potential in front of the surface, a ground plate in contact with the under side) bombards the surface uniformly with negative ions.

The charged paper is then exposed to a projected image or is contact printed. The result is a latent electrostatic image. Dusting of the image with charged resin particles, coated with carbon black, yields an immediately visible image that can be made permanent by fusing the resin into the surface with heat.

Electrofax Paper Properties

Electrofax paper has two major advantages as a photographic material: (1) rapid development of the image (2) lower cost than silver halide and similar processes. It is also a versatile medium in that it can be developed positive or negative by interchanging the sign of the paper and toner electrostatic charge. After development, the unfused toner image may be transferred to another base material such as glass or plas-

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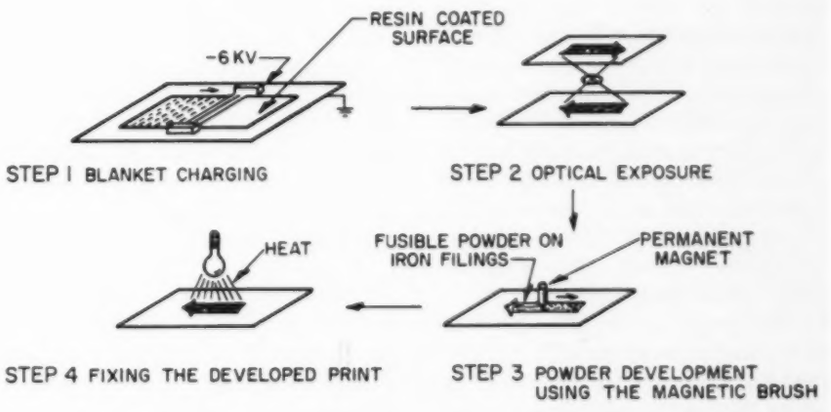

The basic principle of Electrofax envolves the electrostatic charging of a photoconductive surface which is an insulator in the dark and becomes a conductor when illuminated. An electrostatic image is thus created on the surface which may be fused by heating the charged resin particles on the surface.

Trying to find worthwhile men in printing plants for responsible positions is the No. 1 current problem

PRINTING'S SUPERVISOR MESS

By PAUL D. DOEBLER and COLLIER A. ELLIOTT
Collier Elliott and Associates, Garden City, N.Y.

DO you know where I can get a good foreman?" "No, but I sure would like to get hold of a plant superintendent."

How many times have you asked or been asked a question like this. Probably quite a few times if you attend many trade association meetings. The number of people doing the asking seems to increase at each successive meeting, and the supply of qualified managers seems to diminish.

In fact, it's become standard procedure at several meetings for someone to call for some kind of training program for supervisors.

Most Important Resource

Actually, printing, struggling to catch up to an industrialized big-business economy, has run up against the hard fact that people are both its most important resource and its biggest problem. There are shortages of qualified manpower in practically every area of printing, but by far the most crucial shortage is in supervisory and management ranks.

Newspapers face the same problems as do printing establishments. Dollar volumes are not apt to double and triple as rapidly nor will the volume of work vary as sharply. Need for better supervision all the way to the top in newspapers stems from ever sharper competition for the advertiser's dollar and for the reader's available time.

New and improved processes and equipment must be teamed with improved management so that newspapers may improve their product and their service to advertisers while still remaining solvent. This calls for careful organization and well-trained personnel.

Bigger, more complex companies require far more and better managers than does a small shop, despite the decrease in the number of individual businesses. Progressive printers generally see great opportunities ahead for their companies. But they often neglect the most basic problem this growth poses—preparing themselves and their people for the changes ahead. This neglect can be fatal.

The answer to this problem is deceptively obvious—train your management people for the new work ahead. But once the decision is made to train, several questions confront management.

Just how do you go about training people? Do we send our people away to special seminars and training courses? Should we hold our own meetings? What do we want to say in these meetings? How do we go about getting our points across?

As a matter of fact, exactly what do we want to train our people in? Its nice to want to build better supervision, but exactly what makes a better supervisor? And how will we gauge our progress? In dollars and cents on the last line of the balance sheet? Can we identify the effects of training here? Actually, what specific results do we expect?

About this time most managements lean to the idea that a "top-notch man" should be hired from outside the company to put things in shape—only to find that "top men" are very elusive.

Take Training Seriously

Some companies actually do make a stab at training. After a week's sessions at a seminar, or after a first meeting or two at the office, the people are enthused and eager. But somehow, under the pressures of daily production, their enthusiasm never gets translated into practice. In the end the whole project usually lies dormant.

Yet, the need for training remains stronger than ever before. If we look around, we can find several excellent examples of training programs that really work. Why, then, shouldn't they work for us?

The basic reason is that we have underestimated the nature and scope of the problem, and we've approached it as if it were a nice thing to do in our spare time.

Take the problem of supervision, for instance. Most everyone agrees that a good supervisor needs different abilities and skills from those required by the man on the bench. The supervisor needs the ability to handle people—to motivate them, get them to pull in the same direction, discipline without killing initiative and morale.

We usually put a man from the bench into a foreman's spot. We give him less education for super-

vision than a first year apprentice receives in the craft. Yet we expect him to do a job far more difficult than that of a master craftsman.

Analysis of Supervisors

One newspaper production manager who has employed a full time training director for the past two years, offers this analysis of the problems a printer faces when he assumes a supervisory job:

(1) Since printing supervisors almost always come up from the ranks, they are oriented toward manual work. Usually, they have little formal education. Probably they did their best in school in shop courses, and were not inclined toward regular academic studies.

When we make them foremen, however, we ask them to become both students and teachers. They must learn new and subtle techniques and skills for handling men, and they must also teach the men under them when changes are introduced in the operation.

To stack the deck even more, we appoint them to these jobs later in life, at a poor age for learning new ways.

(2) In working at the craft, printers' minds become accustomed to handling one thing at a time—the form or the press they are presently working on.

A good supervisor, however, must juggle dozens of inter-related problems at one time and come up with relatively profound answers. Supervisors who come from the craft often can do an excellent job when working on one problem, but they have trouble when several problems come at once.

(3) Because they came up through the ranks, supervisors usually feel close to men on the bench. They know this group, and the group likes and accepts them. Acceptance in this group is extremely important to them.

By making them supervisors, we stand them apart from their group. They feel ill-at-ease with the men. Their first big problem is finding out how to handle themselves rather than others.

In addition, we give them no preparation for this beforehand, and often we neglect to help them once they are in the job. They either sink or swim—and in the process they often make mistakes that are difficult or even impossible to overcome.

MANPOWER SHORTAGE

The supervisory manpower crisis will get worse before it gets better. The American big-business economy is forcing printers to reorganize to serve it on a big-business scale.

This means fewer and larger printers, more specialization, and more emphasis on larger scale manufacturing rather than the small shop craft approach.

Business forms, books, greeting cards, magazine and catalog manufacturers all show this trend. And the trend is beginning to appear in other areas that were once thought of as general job printing.

(4) Coming up from the bench usually means that our supervisors belonged to a union. The union was their home group during their years on the bench. More often than not, they view their supervisory job as a temporary stint they must serve—eventually they will go back to the group. (In some plants it's actually a sort of promotion within the group to be retired from a supervisory job.)

Union members feel that above all they must protect their union cards. The card represents security; with it they can always get a job. On the other hand, they often see supervisors come and go in their plant like a parade. In these circumstances, they will back off from the supervisory job at the first rough work unless we help them.

Meetings Not Too Effective

It becomes clear from this analysis that a few seminars or a series of spare time meetings cannot have much effect. They simply can't overcome 30 or 40 years of training toward another end.

But this is only half of the problem. Training programs—even ones for management oriented people—often fail because management fails to recognize what is required and provide proper backing and participation. Participation by management is especially important. Management people down the line emulate their bosses. When the bosses consider training important enough to warrant their personal efforts, their subordinates will give it top priority.

But this is not the most important reason for the top management participation. Most printing companies that grow into large organizations in years to come will require major changes in management philosophy and technique.

Typically, a company starts small. The owner runs the show. He makes all policy decisions, sells the product, hires and fires all personnel, personally sees to production and keeps the books.

Start of an Organization

When he finds himself stretched too thin, we hires a salesman and a bookkeeper, then a production manager. And suddenly he has an organization. Each management person is, as nearly as the owner can make him, an extension of himself. Each does his work as nearly like the owner would as possible. So the organization is really the owner in several bodies.

Then, when volume builds to the point that this group can no longer cope with the work, a more extensive group has to be built. And here, we see the trouble start. More people mean delegation of duties and authority and the beginning of responsibility. Now what is needed is modern management through others.

The owner and his original staff have to learn new ways of getting the work done besides doing it themselves. This, too, requires training. So we see that management itself, needs to learn new techniques and to gain understanding of new ways of operating the business. Top management participation has two facets: One to set the stage and underscore the importance of lower management training; the other to learn how they themselves can become better executives.

To the printer who will grow, competent executives are indispensable. They are also extremely scarce. Management training—including that of top management—may be a matter of survival.

The problems are truly formidable, and a printer might well ask if there is any sense in trying to tackle these problems at all. One newspa-

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Electronic Unit to Print Millions of Magazine Labels

ADDRESS labels for magazines can be printed at a rate of 130,000 per hr. by the new electronic Videograph system developed by A. B. Dick Co.

In brief, the system consists of two units. The first is a tape reader and buffer unit which reads and codes subscriber information. It operates directly from a computer or from magnetic tape, paper tape or punched cards. The information received by the unit is edited to eliminate non-print subscriber records and is transmitted in the form of a digital (number) code to the second unit, the Videograph printer. In the second unit, the digital code from the buffer unit is converted into printing signals, and labels are printed on a moving web of specially treated printing paper stock.

Rolls of one up, five line address labels, sprocket punched are delivered by the system. They may be attached to the magazines with conventional label affixing methods or with heat transfer equipment.

The first Videograph system in commercial operation has been installed at Time, Incorporated, Chicago. More than 10 million address labels per week will be printed for four of the company's magazines—*Time, Life, Fortune* and *Sports Illustrated*. Currently, *Time* labels for Canada are addressed by the equipment. Reportedly, the system will permit last minute updating of files to include 200,000 daily changes. Cost of the installation was $500 thousand.

According to a company official, the electrostatic printing tube and its accompanying Monoscope character generator are the heart of the Videograph system. Digital or numerical signals sent to the Monoscope from the buffer unit are translated there to alphanumeric printing signals at the rate of 20,000 per sec. Sixty-four different symbols can be generated by the unit.

From the Monoscope, the signals go to the electrostatic printing tube which is a specially adapted cathode ray tube similar to the one in a television set. In the tube, a latent electrostatic image of the desired character is produced on the treated surface of a moving web of paper which passes by the tube (see Fig. 1). The images are produced at the rate of 6000 per sec.

The web which moves at a speed of 36.5 in. per sec. then moves into the developing unit. (Printing is a three step process: Imaging, developing, fusing. See Fig. 2.) In the developing unit, a thermoplastic, res-

Fig. 1—Signals transmitted by the Monoscope generator activate the electrostatic printing tube shown above. Responding to the signals, an electron gun sends an electron beam across a wire matrix, through which the desired letter images are formed on a moving web of paper, which has been treated with a dielectric coating.

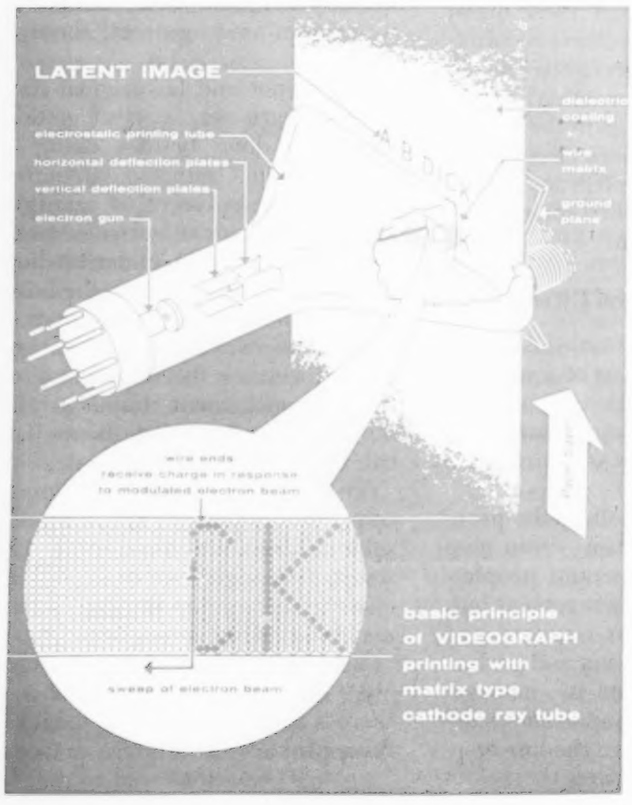
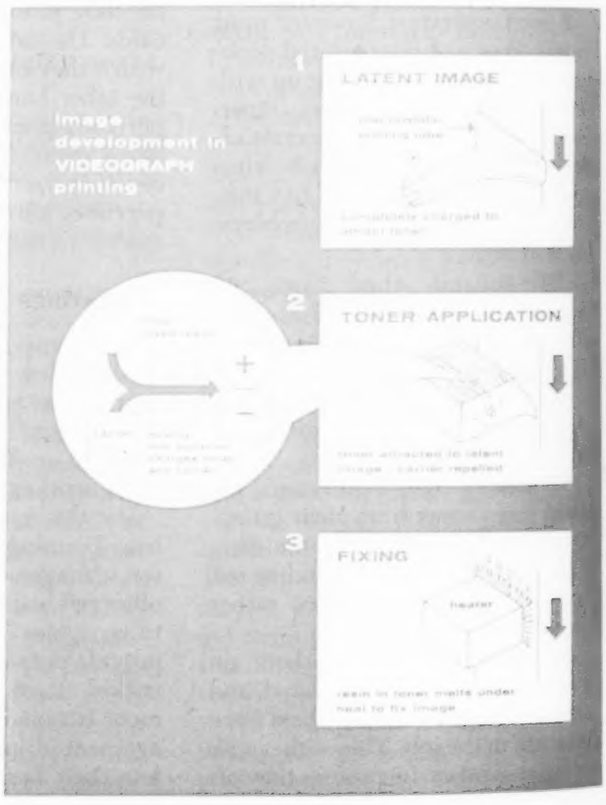

LATENT IMAGE
electrostatic printing tube
horizontal deflection plates
vertical deflection plates
electron gun
dielectric coating
wire matrix
ground plane
wire ends receive charge in response to modulated electron beam
sweep of electron beam
basic principle of VIDEOGRAPH printing with matrix type cathode ray tube

Fig. 2—Printing is a process of imaging, developing and fusing. After letters are formed through imaging in the electrostatic printing tube, the web passes to the developing unit where a toner is brushed onto the surface to make the images visible. The images are fused to the web in an infrared heating unit where the toner is melted.



inous toner powder is brushed on the surface of the web, making the letter images visible.

Next, the web enters an infrared fusing unit where the image is permanently fused to the paper web. In case of shutdown, the paper web is immediately lowered from the fusing unit by an elevator to prevent the web from burning.

After fusing, the web enters a drive mechanism which is coupled with a rotary sprocket punch. Control hole punching of the web and synchronizing of the web and synchronizing of input signals which feed the label information to the printer are done at this point.

The web of printed labels is wound around one of six takeup reels which are supported on a turret assembly. A uniform number of labels may be wound on each reel or the web may be programmed to cut-off at any point in response to an end-of-roll signal. A high speed cutting knife severs the web and forces the leading edge of the web against an empty reel which is brought into position by a counter clockwise rotation of the turret assembly. The operator removes the rolls of printed labels and places empty plastic reels on the spindles.

The paper supply area of the printer holds an active and a stand-

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Training and Technology Stressed at Northwest Conf.

By HORACE ANNIS, *Minneapolis-St. Paul Correspondent*

A NEED to inspire leadership and to institute comprehensive training programs for Graphic Arts personnel and progress in Graphic Arts research were the outstanding discussion points of the 18th annual Northwest Mechanical Conference held in St. Paul, Minn., March 4-6.

Evaluation of personnel entering the Graphic Arts, stepped up training, retraining and incentive programs were among those improvements urged by Charles J. Hentschell, vice president and general manager of the St. Louis *Post-Dispatch*.

The 461 newspaper and supply men in attendance also heard Charles H. Tingley, director of the ANPA Research Institute, point out that the industry is heavily engaged in Graphic Arts research. He cited some of the industrial achievements in research.

"To make sure that there are a minimum of people getting into the newspaper business who do not belong, there must be evaluation of new personnel entering the industry." This is a problem which Hentschell claims belongs to both the employer and the unions of which these new people will become members.

Fundamentals learned in the early days of the industry are no longer adequate to insure acceptable performance by today's journeyman printer. Today's printer must be a craftsman. He must keep abreast of the fast moving changes in production methods and be a master of the fundamentals as well.

"Such developments," he said, "require a man to exercise his creative ability to the fullest and to bring to the aid of his skill constructive imagination and understanding."

Is the necessary training available to keep craftsman abreast of innovations in the industry? This is the question which Hentschell points out, is always hovering over the Graphic Arts industry. The publishers have recognized the need for training their personnel and have set up programs through the American Newspaper Publishers Assn. covering every mechanical department.

Hentschell lauded the training program of the unions, noting that they are able and willing to provide information and training in the advances that have taken place in the Graphic Arts. A wealth of educational material is also available from the producers of production equipment and can be had for the asking.

Training Foremen to Lead

Men who can understand, inspire and lead are few, said Hentschell. With a good foreman training program, foreman weaknesses can be strengthened and supervision improved.

A foreman is chosen because of what he sought to learn over and above his day-to-day duties. Too many employees are satisfied merely to have a job and are not willing to do any more than put in their time. If management wants to develop executives and shop leaders, it must

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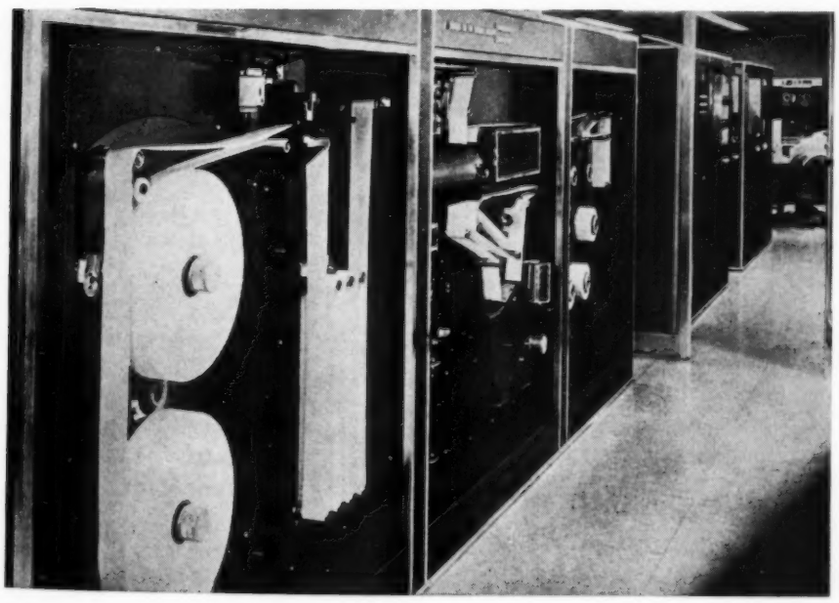
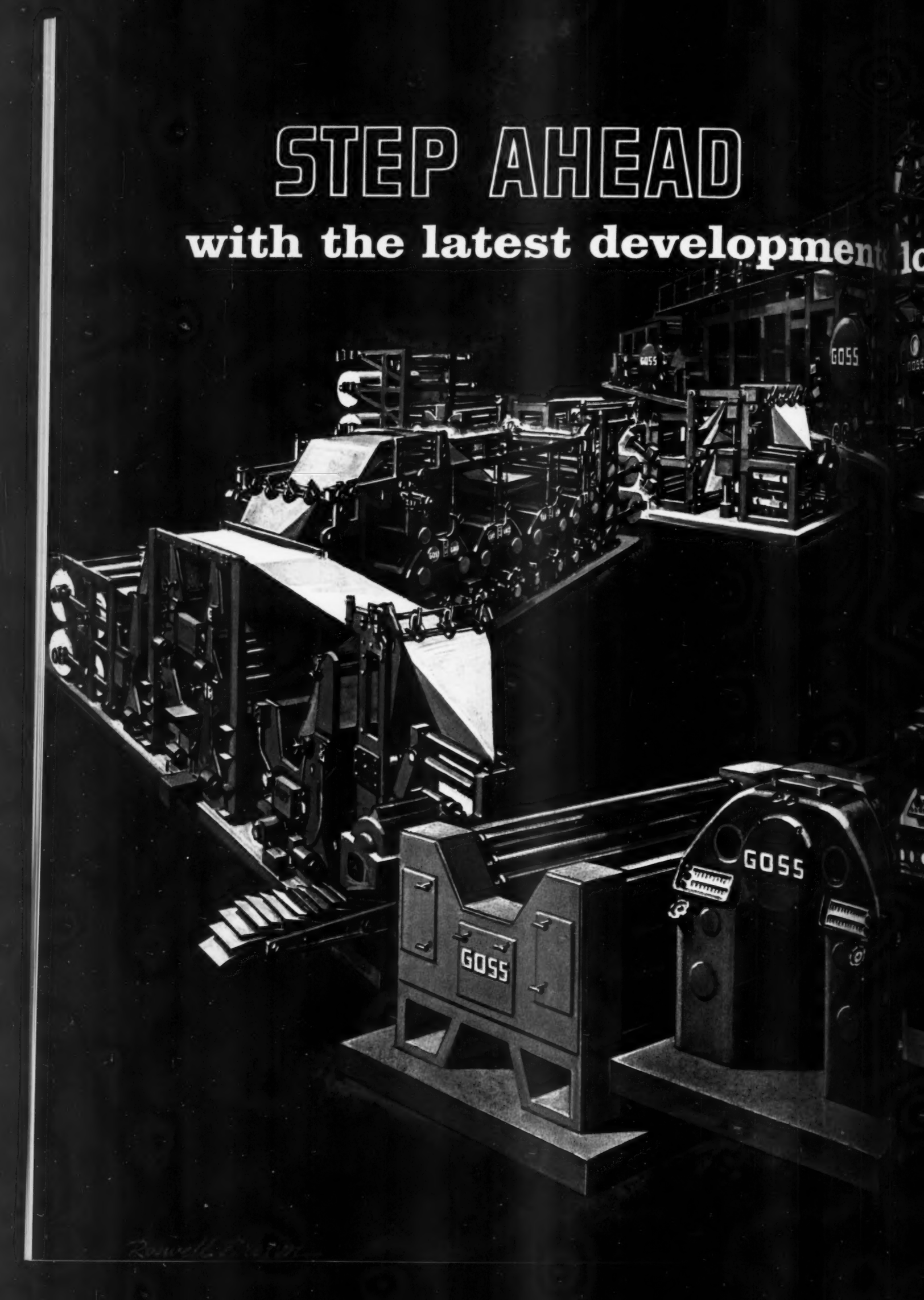
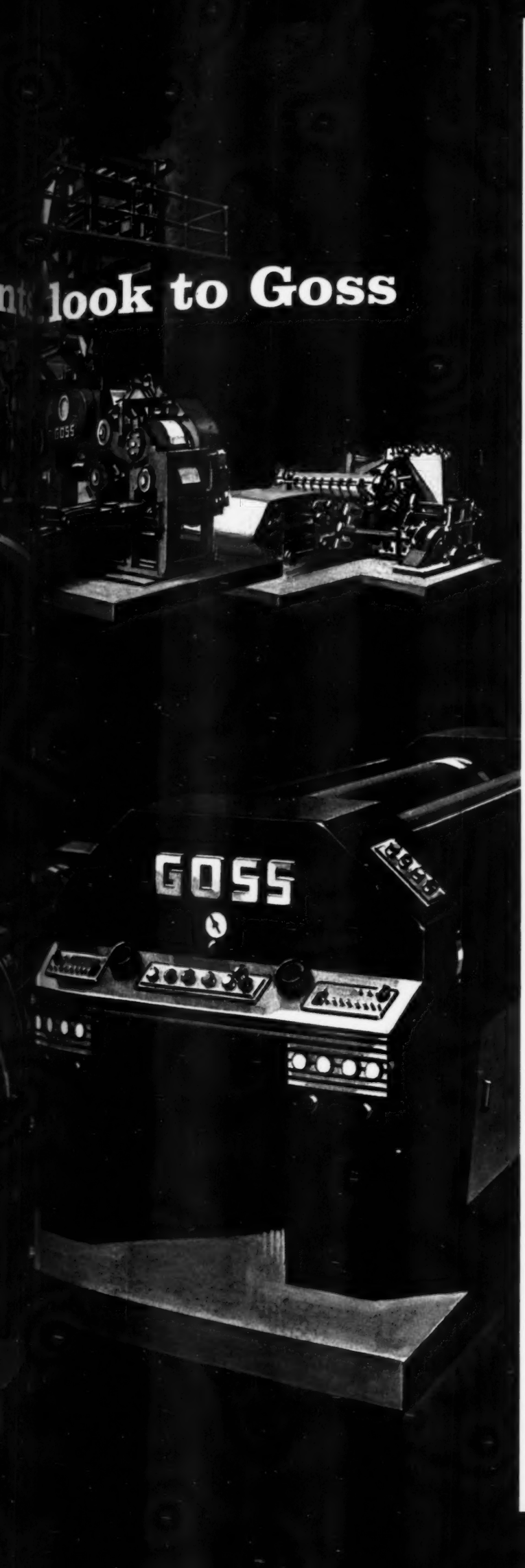


Above is a general view of one of the Videograph systems at Time. Beginning at the left is the paper reel area, the Videograph printer and the label takeup section. Through the door on the left of the aisle, the Tape Reader and Buffer unit is located. The IBM digital computer is at the end of the aisle.

For More Information Circle 75 on Reader Service Card →


STEP AHEAD
with the latest developmen
GOSS
GOSS
GOSS
GOSS



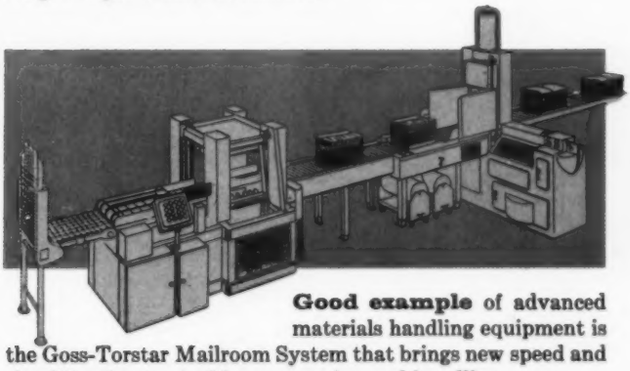
You may ask how we can so boldly predict the unknown without a crystal ball. Fair question.

The past generally offers a strong clue to the future—and Goss' history of press leadership includes the industry's longest list of "firsts," in ROP color pioneering and black and white. This record isn't surprising, however—just consider two facts.

First, you get the *most* experience at Goss—3 out of 4 daily newspapers, and the biggest multi-color magazine installations, are furnished by Goss. Second, you get the *broadest* experience—we work with publications of every size, furnishing equipment and services that extend from roll delivery, through presses, all the way to mailroom bundling. Little wonder publishers feel we've gained good insight into their production problems.

New developments are always in the making at Goss, being tested, re-tested and perfected. We're determined to *continue* being your No. 1 source for innovations, ideas, help and service.

So *keep* looking to Goss for the latest and finest. Call Goss in early, for help in plant planning or modernization. Or to furnish the press and equipment that are exactly right for your needs, from the *only complete* line available.



Good example of advanced materials handling equipment is the Goss-Torstar Mailroom System that brings new speed and simplification to stacking, conveying and bundling.

3 out of 4 American daily newspapers are printed on Goss presses

THE GOSS COMPANY

CHICAGO 50, ILLINOIS

Specialists in newspaper, magazine and roto presses

A DIVISION OF MIEHLE-GOSS-DEXTER, INC.
The leader in graphic arts . . . engineering, service and manufacturing . . . industry-wide and world-wide

try to get young men into the industry who have the aptitude and ability to advance. Once on the payroll, such a person should be given every encouragement from the top men.

"One of the largest problems remaining," said Hentschell, "is how to instill the desire to learn. Also, how to create the desire to change some of the hours spent in relaxation to hours devoted to pursuit of knowledge about one's craft. Thus far, neither the employers or the unions seem to have found a solution to this problem. If and when it is solved, the basic problem of training will have been solved also."

Tingley reported that a year ago the ANPA Research Institute suggested that the RCA Electrofax process could be used in the litho and letterpress platemaking fields. RCA was persuaded to lend ANPA the electrical charging equipment for use in the research project. Three weeks later a plate was produced to prove the theory. This led RCA to invest $100,000 a year in the project with ANPA.

Tingley explained the Electrofax platemaking procedure as follows: Once the copy is ready for the camera, a zinc plate is coated with a material which, when the plate is given an electric charge, will become light sensitive. The plate is then put into the camera in place of film. The shot is made, the plate removed and etched in a rapid etch machine. (See PRINTING PRODUCTION, Feb. 1961, page 42.) According to Tingley, the problem which remains is to find a coating which will better resist the acid bath. Progress along these lines is hoped for this year.

Principal speakers at the Northwest Mechanical Conference were B. H. Ridder Jr. (left), who spoke on advertising trends, and Charles Hentschell, whose topic dealt with evaluation and training of Graphic Arts personnel.

An accurate counter which will count papers after spoils are removed, to cut down on overruns, is a current research project of Fairchild Camera and Instrument Corp. This is an outgrowth of the feeling that, before mailing rooms can be successfully automated, it must be possible to count papers with absolute accuracy.

The greater part of a year was spent in building a counter which utilizes a revolving drum principle. First test counters were installed at the Easton (Pa.) *Express* and at the New York *Times*. It was noted that, through this device, it will be possible to totalize the output of two or more presses.

Institute Research Work

Tingley also referred to the field of newsprint research. He noted that 80 papers send samples of the newsprint they use to the research center for testing. By means of 13 tests, it has been found that brightness, hardness and smoothness account for 50% of the variation in printability. The factors that control the other 50% are being examined, and it is believed that fiber formation, on which tests are being conducted, may be the key to the remaining variation.

Ink problems, such as ruboff, misting and show-through, are under attack by research on water base inks. Rust inhibitors have been developed which prevent press rust, but the tendency of water base inks to fill in halftones remains a problem. Water base inks developed in the research center give superior results and considerably reduce the strike-through. This research has been carried into ROP color inks, and no problems, other than those which exist in black inks, are anticipated.

High production costs and increased outside competition are blamed for the decreasing lead of the newspapers in the general advertising field. B. H. Ridder, Jr., publisher of the St. Paul *Dispatch-Pioneer Press*, called attention to the decreasing lead over the last 10 years and predicted that this problem will become more critical in the years ahead.

Ridder declared that the most likely avenue to lower newspaper production and distribution costs is to make use of new production methods and by more efficient management of the entire production system.

Kennedy Names Public Printer

James L. Harrison, a man of experience in various phases of government and printing, has been appointed the 15th Public Printer of the United States by President Kennedy. He was recently inducted at the Government Printing Office in the presence of members and staff of the Joint Congressional Committee on Printing and other government officials.

HARRISON

Senator Carl Hayden, longtime Printing Committee Chairman, spoke briefly on the new Public Printer's record of achievement. Harrison began his government career with the Bureau of the Census as a draftsman and later as a field and area supervisor.

In 1942, he was transferred to the Office of Price Administration and later became OPA liaison officer at the capital until that agency was desolved. In 1949, Harrison became staff director of the Joint Congressional Committee on Printing, which passes judgment on the purchases of government printing office supplies and materials.

Harrison was also chairman of the Government Paper Specifications Committee and of the Joint Committee on Printing Paper Standards. During his period of service with the Joint Congressional Committee on Printing, he personally surveyed many of the 330 government printing plants located in all sections of the world.

Instruments Prove Superior To Eye In Measuring Color

COLOR recording and measuring instruments should always be used to make up for the poor color memory of the human eye when accurate, permanent color records are required.

This was the main point stressed by members of the staff who conducted the program of the recent Second Annual Color Control Seminar sponsored by Rochester Institute of Technology.

According to F. L. Wurzburg, Printing Ink Div., Interchemical Corp., instruments have some advantages over the eye in controlling color. In some ideal situations, the eye can discriminate smaller color differences than any existing instruments. The disadvantage of the eye is that its color memory is poor. Therefore, color samples which are separated in time or space cannot be compared with much precision. When the samples are together, however, the eye can make a fast and precise judgment concerning whether the samples are alike or different.

Give Permanent Records

Instruments are used when permanent records are required. Since it is difficult for the eye to judge how far a color is off from the standard, instruments can be used in setting tolerances. Instruments properly used can resolve disagreements between the buyer and the purchaser.

Dr. Henry Knoll, Bausch and Lomb Optical Co., explained that the eye is a very complex mechanism, and that we must know a great deal about the eye to understand color vision and interpret color measuring data. The eye acts as though it contained three receptors. The red receptor responds to stimulation by electromagnetic energy in the wave length region 600 to 700 millimicrons; the green from 500 to 600 millimicrons; and the blue from 400 to 500 millimicrons.

A spectrophotometer measures reflection or absorption properties of material at each wave length. The information obtained from a spectrophotometer does not tell us much about how the color looks. In order to interpret spectrophotometric curves it is necessary to transform curves into numbers which are related to the way the eye sees color. An internationally recognized system of color measurement is used to accomplish this. The C.I.E. method of designating color uses curves developed for a standard observer which define the sensitivity of the three receptors. Using spectrophotometric curves and the curves for the standard observer three tristimulus values can be calculated.

What CIE System Does

Knoll added that although the C.I.E. system specifically designates a color it does not describe in exact terms how a color will look. The energy reaching the eye from an object is one of the most important factors in determining how a color will look, but there are many other things which also affect color judgment. The color or lightness of the surrounding areas have a great deal to do with how the color will look. In addition, factors such as the color of illumination, the size of the object, the brightness of the light, all have an effect on the color appearance. Color looks different to different people.

Some individuals are color weak, some are color deficient, and some are color-blind. Many color deficient workers seem to be able to judge color variation very well. However, about 10% of males are color deficient in some way. Consequently, everyone who is considered for a position of responsibility in color control should take a color blindness test.

Importance of Light Source

The light source is a very important aspect in the color judging problem. This part of the color complex was discussed by Warren Reese, vice president, Macbeth Corporation. Reese explained that the only fixed attribute of a color is its ability to selectively modify the light which falls on it. The sensation of color is a combination of the spectral energy distribution of the light source, the spectral absorption characteristics of the object, and the spectral sensitivity of the eye. In other words, the color of an object depends on the object, on the light source, and on the eye.

The purchasing agent is an important element in the color control problem. Many of the larger purchasers of printing have begun to use more sophisticated techniques

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WHAT'S AHEAD FOR THE READER

Anyone who has spent 10 years in photocomposition has an interesting story to tell of his experiences. Look in the May issue for this first person account of how one such person started, how he overcame many of the production problems encountered, and finally how his company met success in this relatively new field.

Readers who are interested in lithographic production will find a sequel to this month's feature on wipe-on litho plates. Author Gyan Madan explains the techniques followed by some companies in getting full performance from these plates. He also provides some of the requisites for using wipe-on plates under production conditions.

Have you ever heard of a reading machine? An article in the next issue will include details on how one such machine can read typewritten pages and convert them into punched tapes.

Also in May, read our editorial coverage of the PIA web offset meeting and the Electrotypers Assn. technical conference. Keep up with the latest developments in the printing industry through the pages of *Printing Production*.

By ROBERT SHERIDAN, *President*
Nationwide Leasing Co., Chicago

Equipment Leasing Can Be Growth Stimulant

LEASING new equipment instead of buying it can yield growth plus profits to many printers. Through leasing, a printer is supplied with additional capital in the form of new machinery while his own cash is left free to work in the business. More working capital, new cost cutting equipment, and certain tax-timing advantages can add up to this cited growth and profits.

Originally, leasing was introduced during World War II to fulfill the emergency needs of big business. Since then, it has spread to small and medium sized businesses because leasing acts as an equalizer. That is it helps small firms compete with larger ones by giving them a means of obtaining the latest equipment without depleting their capital.

SHERIDAN

Currently, equipment leasing has become more common throughout the spectrum of American business. Production equipment on lease to American industries at the end of 1959 totaled $307 million; of this approximately $5.8 million was on lease to the printing industry. By the end of 1960, the volume of equipment leased by printers had climbed to $8.9 million.

It must be stressed that the benefits of leasing are dependent upon the nature of each company. Each printer must determine the best method of obtaining equipment for his particular situation.

Does it actually work and how does it compare in cost with other methods are the questions most frequently asked about leasing.

The answers may be found by studying the case of a medium-sized Midwestern printer who recently leased equipment worth $70,000. The firm in the illustration was in a position to obtain the equipment by any of the common methods—cash purchase, installment bank loan, conditional sales contract or lease. To determine the best method for acquiring the new equipment, the company's accountant prepared a comparative analysis of the real costs involved in the various methods. The results of his analysis led the company to lease the equipment. Details of the accountant's analysis follow:

The printing company in this illustration is a soundly run firm with a rate of profit on working capital before taxes of 31%. (The printing industry's average rate of profit on working capital before taxes for the last five years has been 37%.)

Terms for cash purchase were cash, net 30 days. Depreciation method used by the firm is sum-of-the-digits. The lease plan covered a 10 year period, which is the average useful life of the different pieces of equipment. (Color presses, folding and cutting machines, materials handling equipment and office machines were among the equipment sought.)

The plan was broken into a five year original lease term and five, one year renewals. During the period of the original lease, the company was required to pay the price of the equipment, $70,000, plus a leasing charge of 6% of the original price per year. During each of the five, one year renewals, the cost was to be 5% of the original cost per year or $3500 per year. Down payment on the lease amounted to 5% of the cost or three months lease charges.

It was the task of the accountant to determine whether the greater total cash outlay under the lease plan would be offset by profits earned on the working capital left free by the lease during the 10 year period.

(An objective study, including voluminous tables, covering this and other aspects of equipment leasing, has been published by the Foundation for Management Research. It is entitled, *The Pros and Cons of Leasing*, and is available to executives from the Foundation at 121 W. Adams St., Chicago 3, Ill.)

Where the Cash Goes

Starting point for the analysis was the larger cash flow generated by the working capital left in the business because of leasing. In the first year, this amounted to approximately $52,000. This cash excess recurred in smaller amounts in succeeding years, and in the later years the excess was replaced by a cash deficit.

Projecting these figures over a 10 year period, the accountant concluded that the company would be about $35,000 ahead in cumulative net profits after taxes as a result of leasing instead of buying. This is 50% of the original cost of the equipment.

In arriving at this conclusion, the accountant calculated the net profits the company would earn by putting to work the additional working capital made available by leasing. Also considered were the cumulative net profits earned on the cash excess and the after tax retained net profits (which were added to the cash ex-

cess). Basis for the calculation was the company's average net profit of 31% before taxes and 15% after taxes.

The conclusion made by the accountant reflects an economic fact of life: When a company takes any sum out of its working capital and freezes it in equipment, the company gives up exactly the amount of profit the frozen capital would earn if used in the business. For a printing firm where working capital can earn profits at a favorable rate, this can amount to a large sum (such as the $35,000 in this case) over a 10 year period.

Leasing vs. Installment Purchase

Cash purchase is not as common among medium and smaller businesses as it is among larger ones. More usual is purchase on a conditional sales contract. Terms for conditional sales contracts, at the time the lease was signed, were 25% down payment with three years to pay the balance. The financing rate was 6% per year on the original $52,500 balance. (Current financing rates are 4½% per year.)

In comparing the costs of leasing vs. installment purchase, the accountant concluded that if the equipment were leased, the company would earn about $22,000 more in cumulative net profit over a 10 year period than if it bought the equipment on a conditional sales contract. The $22,000 represents 31% of the original price of the equipment purchased.

Leasing vs. Bank-Financed Purchase

The final method available to the printer in the illustration was purchase through a bank loan. Banks are essential to all businesses; but in making equipment loans, banks seldom lend 100% of the value of the equipment. At best, banks lend 75% of the value if the equipment is saleable machinery.

Also banks cast a jaundiced eye on applications for long-term (more than a year) loans to acquire equipment. Only a small portion of a firm's borrowing from banks can consist of long term equipment loans. It would probably surprise many businessmen to compare the rates on 36 month chattel mortgages with those on 90 day notes; they are not at all the same.

The terms quoted the printer in the illustration were a loan covering 75% of the value of equipment; 25% had to come from working capital. Finance rate was 5% per year of the original balance for three years. Using the same calculations for comparison that were used previously, the accountant determined that at the end of the ten year period, the company would be about $19,000 ahead in greater accumulative net profit after taxes by leasing the equipment rather than buying it through bank financing. This amounted to 28% of the original investment.

In summary then, this company found that it would be ahead in net profits by leasing the $70,000 worth of equipment rather than buying it through cash purchase, installment purchase or bank financing.

In achieving economy through leasing, the company in the illustration took advantage of these inherent benefits of leasing:

1. The company's short-term credit position was not impaired by leasing. Only the lease payments for the current year are shown on the balance sheet as a liability, with the remainder footnoted.
2. The cost of the equipment is paid out of earnings made during its use.
3. True leasing charges are tax deductible as operating expenses.

Not a Business Cure-All

However, it must be said that equipment leasing is not all beer and skittles. It is not the sovereign balm or cure-all remedy for all business ailments. There is one factor cited as the main disadvantage of leasing: At the end of the lease term, a company does not own the equipment.

This is a fact. However, whether or not this fact is a disadvantage depends on actual cases. In the case of the company in the illustration, not

WHAT CAN BE GAINED BY LEASING

1. Long term financing is obtained without impairing a company's short term credit position. Usually leasing offers longer terms than are available through other sources of funds. Since only the lease payments for the current year are shown on the balance sheet (with the remainder footnoted), current ratios are only slightly affected.

2. The cost of equipment can be paid out of earnings made during its use.

3. True leasing charges are deductible as operating expenses. This permits companies to write off the cost of equipment realistically and to replace equipment when necessary.

4. Long term financing is obtained without diluting the equity of owners or stockholders or interfering with management.

5. Companies can obtain the precise amount of financing needed. Thus a company needing $521,658 worth of equipment would find it preferable to lease equipment rather than resort to the bond market or an issue of stocks in that odd amount. The example of the City of Boston may prove valuable to businessmen. The city recently announced that it had saved 23% of its interest costs by financing precise sums, rather than larger round sums.

6. Leasing protects a firm against possible early obsolescence of equipment. If technical advances make it necessary to scrap machinery in seven years, the company's will have already deducted the full cost of the machinery.

COMPANIES THAT SHOULD NOT LEASE

1. Those companies which have all the working capital and new equipment needed should not pay a leasing company for use of capital.

2. Companies which earn less than 10% on working capital before taxes or less than 4.8% on working capital after taxes would not profit by paying leasing companies for use of outside captial.

3. Marginal companies should not lease equipment. It is a rule of thumb that most companies will not lease equipment to firms if the value of the equipment exceeds 50% of the firm's net worth.

owning was an advantage. The reason for this is that the company earned more profits through not owning than it would have by owning the equipment. In all cases, where not owning will yield greater profits than owning, leasing is an advantage, and vice verse.

Not owning equipment at the end of the lease term is a disadvantage only if the used equipment at the end of the lease is worth more than the additional profits earned. To use the Midwestern printer as an example, leasing would not have been profitable for him if the value of the equipment at the end of 10 years had equalled 50%, 31%, or 28% of the original cost. (These percentages are equal to the increased net profits earned by leasing rather than purchasing by other means.) It is the experience of most companies that such equipment, after 10 years, does not retain these values.

Firms Who Shouldn't Lease

There are three types of companies that will not find leasing advantageous. It would be foolish for a company that has all the working capital and new equipment needed to pay a leasing company for use of capital (in the form of equipment).

Companies which earn less than 10% on working capital, before taxes, should not lease. This is not 10% on total investment, but on working capital before taxes, or 4.8% on working capital after taxes. It is not beneficial for such companies to pay a leasing company for use of outside capital.

Finally, marginal companies should not lease. It is the rule of the thumb that no leasing company will lease equipment to a firm if the value of the equipment is greater than 50% of the firm's net worth.

Terms from 3-10 Years

Leasing equipment is a long term arrangement of from three to 10 years. Most leases fall between three and five years. Payments are either in equal monthly sums or amounts adjusted to various accounting systems.

Companies wishing to lease are investigated as to financial position. The company may select the supplier it wishes. The cost is the original price of equipment plus a leasing charge. The entire cost of the equipment is paid in the original leasing term, and renewal options are available in one or more years.

Purchase options are available, but are not often recommended because they can be interpreted by the Internal Revenue Department as converting the lease into a conditional sales contract. The effect of such an interpretation is the removal of the benefit of deducting leasing charges as operating expense.

Converts Projection Film to Plate

Du Pont has developed a technique for converting Cronaflex projection film to an offset plate that can be run on a standard offset press.

Cronaflex polyester base projection film is used primarily for the reproduction, enlargement and reduction of drawings and maps. It is also used for making halftones where durability and size holding are important. Enlargements or reduction can now be made directly on the Cronaflex plate, reportedly passing the extra steps normally encountered in making an offset plate of a different size from the original negative.

According to the manufacturer, the process is especially useful in a microfilm retrieval system. Because of the nature of the high contrast emulsion, plates can be made from low density negatives. Cronaflex plates will produce prints in quantities of 5000 or more, and runs of up to 100,000 have been made with satisfactory results.

10 Minutes to Make a Plate

It takes approximately 10 min. to make a plate which can, if desired, be put on the press wet and run. In making a plate, Cronaflex film is exposed to a negative long enough for the image to penetrate through the emulsion to the film base. A lithographic developer is then applied, followed by a stop bath.

The next operation is an etching treatment, using 3-ES etch solution made especially for this purpose. This softens and removes the gelatin and blackened silver in the image area. A spray wash completes the removal of the loose gelatin particles, and the plate is ready for the press.

If dried and printed at a later time, the plate should be moistened thoroughly by using 3-PS solution before any ink is applied. The same solution can also be used to clean the plate after use. Film plates can be stored indefinitely and reused.

Methods for preparing Cronaflex projection film, including the use of three new processing chemicals, are described in a technical bulletin issued by Du Pont's Photo Products Dept.

Typesetting Taught at New Baltimore Institute

A new typesetting school, the Baltimore Typographic Institute, has been approved by the Maryland State Dept. of Education and began classes on April 12.

Courses are offered in machine composition, using standard typecasting machines, hand composition, intricate makeup, proofreading and other composing room procedures. Students have the opportunity to learn all composing room functions and many types of work, including maintenance of typecasting machines and type face identification.

Each student is able to select his own preference of composing skills. Individual attention is reportedly stressed during the 30 week course.

Additional information about the school may be obtained by writing Baltimore Typographic Institute, 407 E. Saratoga St., Baltimore 2.

Fairchild Camera Enters Web Offset Press Field

Fairchild Camera and Instrument Corp. has announced its acquisition of the 5550 Harbor St., Los Angeles facility of the Technical Products Div. of Waste King Corp. The transaction, jointly announced by John Carter, president of Fairchild Camera, and Bertram Given, president of Waste King, includes manufacturing rights for offset printing presses.

Involved in the acquisition is the Color King webfed offset press. The press is especially suited for newspapers producing four-color process work.

By JOS. V. BELLANCA, *Asst. Product Planning Mgr.*
*The Dexter Co., Div. Miehle-Goss-Dexter, Inc.**

Printers Need to Think More About Work Integration as it Affects the

TOTAL JOB

IN the high speed web, book and publication field, where job specifications remain more or less constant, the folder is an integral part of the printing press. In the commercial field, a variety of sizes and design of separate folders are used because of the constant changes in job specifications. Each job is different and the folding and finishing requirements change from one job to another.

In the printing industry, many think in terms of departments and operations rather than the complete plant operation. Even though the trend is to integrate machines, we have not gotten around to integrating departments. We still think in terms of the composing, platemaking, press and bindery departments.

I think it is high time we started to think in terms of the total job. When a customer gives us a printing order, he doesn't give a separate order to each department. The customer is interested only in the total printed piece. As long as everything goes well, few think in terms of integration—but when a job goes sour, we all look for the place to put the blame. In 90% of the time, mistakes and sour jobs can be relayed to a lack of cooperation or exchange of information between the various production departments.

One of the biggest problems we are faced with is the lack of integration of departments. So, one of the important factors that must be emphasized is that all departments must think in terms of the *total job*. Not only our little part of the job—but all parts of it.

True Preplanning

One of the important areas that covers departmental cooperation and its relation to the total job is preplanning. A big problem in binding is that binders or bindery supervisors are not consulted or given a chance to voice their know-how as to the way the job should be run.

If there were more preplanning, more integration and cooperation between the bindery and pressroom and other operations, we would have a better total job with fewer problems. We all know that just by looking at any form imposition book there are many ways to run a job. We also know there is actually only one best way, and several alternatives of varying efficiency.

What is good for the pressroom is not always good for the bindery. One of the things that comes to our attention over and over again, is that the folding department or the bindery is not consulted nor given the chance to help the job along. I think one of the ultimate goals and one of the ways to lick folding problems is to have a complete under-

*Address given before 1960 Atlanta convention, Intl. Assn. of Printing House Craftsmen.

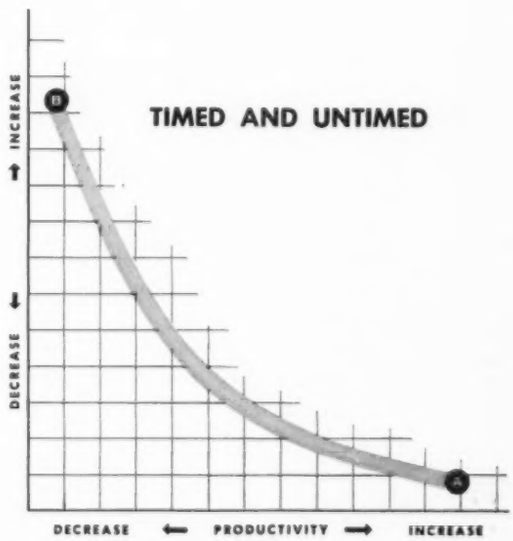

Chart illustrates the principle of production in an untimed machine such as the buckle type of bindery folder.

standing before the job becomes a problem on the folder. The bindery is in a difficult position because it handles the tail of the job. The bindery must correct or cover up preceding production errors and must also get the job out extra early, because of the time that has been lost previously.

Closer cooperation by all of the departments is a necessity. Preplanning is a give and take proposition. But, with preplanning before the job gets there, the bindery is not as likely to be saddled with an impossible fold or a slow fold, which in either case can cause a completely haphazard bindery operation. With preplanning, a lot of the problems that arise day after day after day could be eliminated.

Deficiency in planning eventually becomes apparent in the binding. The bindery can save hundreds, even thousands of dollars in the pressroom, the composing room and in other areas, if permitted. But all of the money the bindery could have saved will be lost if the job comes into the bindery in unsuitable form.

Machine Utilization

A fancy name that could be given to complete preplanning is machine utilization. Machine utilization always makes me think about a man who has a fancy sailboat, but instead of using the sails, he rows with the oars.

With proper machine utilization, we can add rather than subtract profits. Machine utilization means using the layouts and impositions which make the fullest use of a machine. These layouts and impositions reflect back to the preplanning stages of the job. One switch in an imposition can make an easy job out of a difficult and sometimes impossible job.

In order to understand what machine utilization is, we must understand some of the machines' underlying principles.

The chart accompanying this story shows graphically the principle of production in an untimed machine such as the buckle type folder. The horizontal line shows an increase and decrease in productivity. Everything to the left of that line is a decrease in productivity. Everything to the right is an increase in

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Improved lighting has made the typesetter's job faster and more accurate in the plant of L.S.T. Typography, Chicago. With General Electric Power Groove fluorescent lamps, lighting levels are four times those existing in the company's old plant.

Typography Firm Raises Roof To Improve Lighting

THE L. S. T. Typography Co. literally "raised the roof" of its new Chicago plant to improve its lighting system.

The typesetting firm changed its building plans at the last minute to increase the height of the roof 18 in. This permitted the company to install a lighting system which provides the quantity and quality of light recommended by lighting authorities for difficult seeing tasks. "We decided to give particular attention to this aspect of our new facilities," said John E. Jensen, firm president.

Instrumental in the planning of this advanced lighting system were power engineers of Commonwealth Edison Co. and application engineers at General Electric's Nela Park facility.

Provides 200 Foot-candles

The lighting system features General Electric Power Groove fluorescent lamps which provide approximately 200 foot-candles, as compared with 50 foot-candles in the company's former plant. A total of 398—8 ft. lamps and 80—4 ft. lamps comprise the complex system.

The fixtures, with 35 deg. shielding and 42% upward light component, are low brightness units of anodyzed aluminum. They are mounted on 8 ft. centers at a height of 11 ft. The raised ceiling is 12 ft. above the floor level.

Uniform Light Level

In spite of the relatively low mounting height of the fixtures, lighting levels are virtually uniform at work level between rows of fixtures. Linotype machines are located so that operators enjoy maximum seeing comfort. Supplementary lighting employed by many linecasting machine operators is not needed because of the high level of general lighting. Emergency incandescent lighting is provided as required by city code.

The new plant has 20,000 sq. ft. of floor space, and pastel colors used on the ceiling, walls and structural members of the plant contribute to the quantity and quality of the lighting. A comfortable temperature in the plant is assured in all seasons by four 20 T. heat pumps.

The air-to-air heat pumps remove the heat or cold from the exhaust air before it is discharged. They also condition the incoming air. The heating-cooling system is thermostatically controlled.

Closer Employee Ties Urged By Publisher

AT MID-ATLANTIC CONFERENCE TO ENCOURAGE BETTER PRODUCTION

By MacD. SINCLAIR *and* ROBERT SCHNEIDER, *Editorial Staff*

NEWSPAPER production employees make greater effort to do their work efficiently when management recognizes they are important to the operation. This statement was made by Eugene Simon at last month's Mid-Atlantic Newspaper Mechanical Conference. Simon is publisher of the Tarentum (Pa.) *Valley Daily News*. The conference was held at the Penn-Sheraton hotel, Pittsburgh, Mar. 23-25.

In discussing *Human Elements of Newspaper Production*, Simon said employees respond willingly when they feel they are a part of the production team. This can be done, among other things, by encouraging the employees to participate through representation on the board of directors; by passing along to employees news about innovations before announcement is made to the public, and by management's backing up supervising executives in the various production departments.

Attendance at the conference was over 500 people. A number of equipment and supplies exhibits drew considerable interest during conference days.

The 1962 conference will be held at Hotel Shelburne, Atlantic City, N.J., Mar. 29-31.

How to Get Production

A top production team in newspaper work is one to which attention is paid by management. The method of handling the human element in newspaper production was described by Eugene Simon, publisher of the Tarentum (Pa.) *Valley Daily News*, as being the difference between "a red hot production department and a cold turkey operation."

A constant personnel inventory is excellent insurance. Through it can be determined if the most important element in production—the human being—is functioning correctly. Simon asserted that to obtain utmost cooperation from the people working in the plant, an atmosphere of belonging must be created. Promotion from within the company is a wonderful vehicle by which to reach this goal.

A healthy bonus from a bumper profit year will serve a dual purpose. It will offer an excellent chance to revitalize the man's performance as well as make him feel like the company cannot function without him.

Let the men in the plant know of a major change or development before making it public. Simon follows this policy. He also submitted that a board of directors composed of department heads and newspaper employees is considerably more efficient than a board which has no contact with day to day plant operation.

Frequent meetings of department heads and vertical fluidity of information from the top to the bottom of the production line serve to contribute to interdepartmental understanding. They also eliminate harmful competition and departmental secrecy among employees.

The value of training, in-plant as well as formal courses offered by educational institutions, is best demonstrated by top performance from production personnel. "Go to bat for all your people; give key personnel authority and back them up," was the advice Simon passed along to newspaper managements.

Simon also brought out the often overlooked aspect of family relations. He cited an example of increased production from one employee as a result of his family's visit to the plant during a periodical open house event. Such events instill pride and important feelings in production people. Physical changes in the plant layout, according to Simon, go a long way in making the printers' job a more pleasant one.

From Trade to Profession

A plea for the newspaper industry to contribute part of its profits to establishing a more extensive education program for development of future printing production executive personnel was made by Dr. Mark Ellingson, president of Rochester Institute of Technology. He pointed out that of 400 recent applicants for the RIT printing program, only 140 could be accommodated by the Institute.

Dr. Ellingson suggested that the status of the printing industry could be elevated from a "trade" to a "profession" if the industry will supply worthy educational facilities.

There are approximately 73 medical schools and many technical schools throughout the country set

Key figures at the Mid-Atlantic Newspaper Mechanical Conference are (left to right): Jack Hawkins, conference co-chairman and mechanical superintendent, Greensburg (Pa.) *Tribune-Review*; William Krulish, conference co-chairman and mechanical superintendent, Maplewood-South Orange (N.J.) *News-Record*; Lloyd P. Burns, executive secretary, New Jersey Press Assn., and G. Richard Dew, conference director and general manager, Pennsylvania Newspaper Publishers Assn.

up to technically train professional people. These provide specialized and general advanced instruction. But in comparison, the printing industry has very few schools from which to draw highly skilled top personnel.

Ellingson recommended that an attempt be made to educate young people at a high school level concerning the changes and the challenges in the printing industry. He advocated spending some of the industry's $14 billion annual income in establishment of educational programs and research and development to improve the competitive standing of the industry with other major industries.

Ellingson praised the 35 odd journalism schools in the Graphic Arts. He believes that their programs should cover all aspects of printing production with specialization courses in all its facets. Included should be a continuous program of short seminars for refresher purposes, as well as for introduction of new developments.

The abolition of trade secrecy through establishment of free information centers is another of the improvements in educational innovations supported by Ellingson.

Better Equipment Use

Ways of keeping down costs and improving production efficiency by making better use of existing equipment were pointed out by William D. Rinehart, director of the American Newspaper Publishers Assn. Research Institute's Mechanical and Service division.

Instead of thinking constantly in terms of deadlines, Rinehart recommended making production conditions more efficient by examining the equipment layouts of the various production departments and revamping the poorly laid-out sections. He also stressed paying close attention to the technical publications which are published for use by the printer.

The excuse that we cannot run color because of faulty equipment can often be eliminated. Rinehart suggested that practically every plant can run spot color and do a creditable job if a little care is exercised. By cleaning the fountains properly, using the inks as called for and seeing that they are adjusted properly, and that the ad is run on the best available newsprint, ROP color can be a successful operation even when run on present equipment.

The checking of newsprint for imperfections as it is delivered to the plant can often play a major role in preventing press web breaks. Rinehart also proposed institution of closer liaison between the editorial room and the composing room in order to expedite an even flow of copy and thus eliminate rush hour conditions at the production end.

From the standpoint of personnel, Rinehart asserted that without interdepartmental cooperation in production, all the new equipment in the industry will not help to eliminate production problems. He urged each man in the production operation to become an expert, not only in his own job, but in jobs of those people involved in other phases of production.

Photocomposition Progress

By comparing hot metal with cold metal photocomposition in the ad composing room, Franklin D. Schurz, publisher of the South Bend (Ind.) *Tribune*, pointed out that as early as 1956 the *Tribune's* composing and engraving departmental costs were as much as 5% lower than the hot metal operation.

He reported that before introduction of photocomposition in his plant, it took over 13 hrs. each to produce certain advertising pages. The time has since been reduced to 7½ hrs. per page.

Although both processes may be used in the production of ad plates, Schurz champions the idea that full conversion to phototypesetting is the most economical course to take.

Before changing to cold metal composition of news content in newspapers, Schurz said that a quicker and less expensive way to produce a plate must be found. At present, too much time is spent in the engraving department to make a plate containing news matter. A stereotype plate can be produced much cheaper.

Status of Superintendent

Harmonious relations and smooth production of a newspaper depends on the ability of the advertising, news and production departments to understand each other's responsibilities.

George N. Scheid, advertising director, Tarentum (Pa.) *Valley Daily News*, emphasized the point that a good advertising man should not be a mechanic. "Specifically, the advertising man should be sensitive to what motivates people toward specific products; he is not supposed to be a mechanical expert."

If advertising and editorial departments would meet deadlines regularly, Scheid commented, 90% of the troubles with the mechanical

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Departmental Cooperation Holds Key to Newspaper Life

COOPERATION among production, editorial and advertising departments can win readers and influence profits for newspapers, according to Collier Elliott, of Collier Elliott and Associates, New York. Elliott served as keynoter of the Southern Newspaper Publishers Assn.'s Western Div. Mechanical Conference, in Dallas, Mar. 5-8. Attendance at the conference was 355.

Presiding officer of the meeting was Anthony L. Borho, composing room foreman of the Lubbock (Tex.) *Avalanche-Journal.* J. O. Wasson of the Fayetteville (Ark.) *Northwest Arkansas Times,* was named chairman of the 1962 conference which will be held in Oklahoma City, Mar. 4-6.

Attitudes Block Cooperation

According to Elliott, the attitude that "the other guy must be some kind of a nut and therefore incompetent to do what he does" stands in direct opposition to cooperation between newspaper departments. He stressed the importance of each department investigating the others to understand their difficulties and goals. This should lead to the realization that the objectives of all departments are really identical and only seem to be different, he said.

Elliott urged production men to take a look at the deadline schedules. "Realistically, we know that we have been hoarding time between copy close and press start," he said. Elliott suggested that this deadline time be extended so that another late story or ad addition might be included in the edition because these are the factors that win readers and influence profits.

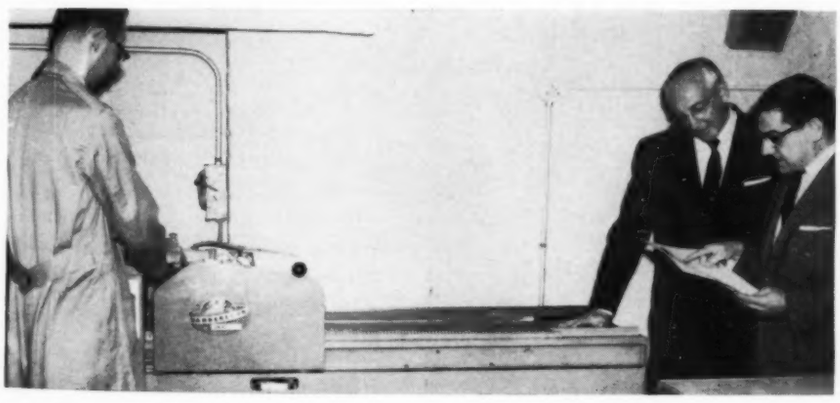
According to Elliott, the necessity of including late stories and ads has been heightened by the introduction of television which is more spontaneous on stories and which is pursuing newspaper advertisers. Elliott believes production departments can handle later deadlines by fully utilizing the new high speed production equipment.

Realizing that old barriers to cooperation cannot be destroyed overnight, Elliott said that the change in attitude must start at the top (the production manager and foreman) and then filter down.

He cited one newspaper which has achieved an atmosphere of cooperation by educating all departments in the responsibilities of the others. All production men are acquainted with the problems of advertising salesmen, makeup men and editorial staff members.

One scheme for improving cooperation used at this particular newspaper was the introduction of tours through the composing room by advertisers and ad salesmen. Questions were encouraged during these tours; and it is believed that both the ad salesmen and composing room journeymen learned to understand each other's problems better through them.

In these days of high mortality of newspapers, Elliott said, "cooperation between departments can be for our newspapers and for all of us, life, itself." ⊕



Vandercook Loans Press to LTF—A Universal I Test Press, which features power inking, plastic rollers, automatic washup, adjustable bed and vacuum base, has been loaned to Lithographic Technical Foundation for experimental purposes. Shown left to right are: Charles H. Borchers, supervisor of LTF's Paper, Ink and Press Relations Div.; Edward O. Vandercook, president of Vandercook and Sons, Inc., and Michael H. Bruno, LTF research director.

Research-Minded Men Are Wanted

There is a great need in the Graphic Arts for research-minded young men who are willing to broaden their sphere of knowledge through advanced study. This need was highlighted recently by Dr. A. C. Zettlemoyer, research director, National Printing Ink Research Institute, and professor of chemistry at Lehigh University, Bethlehem, Pa.

High level Graphic Arts research is needed to raise the Graphic Arts to a science, and it can be just as exciting as the seemingly more glamorous jet and space fields. In fact, all sciences require printing for communication and therefore lean on the Graphic Arts for progress.

"Gone are the days when progress could be made on old-fashioned string and bailing wire stop-gap methods," said Zettlemoyer. He said that electronic computers, high speed photography and other scientific advancements are used more and more to solve basic problems upon which Graphic Arts progress depends. In addition, bigger roles are being played by classical physical chemistry tools, such as measurements of light scattering, heats of wetting and radiotracers.

A major problem is the inability to attract qualified men to undergo the training period. The logical training ground is in the graduate schools of universities. However, fellowships and graduate assistantships of reasonable remuneration go unfilled due to the lure of initial high salaries paid by industry. Yet the long-term advantages of advanced study cannot be over emphasized.

PRINTING PRODUCTION's
OVERSEAS' REPORT

U.S.-Dutch Printers in Web Offset

Four color web offset printing soon will be brought to publishers and advertisers in Europe by a recently formed Dutch-American corporation. To be known as Smeets-Safran Printing Co., the offset firm will be located in Weert, The Netherlands.

American participants in the company are Safran Printing Co., Detroit, and N. Joseph Leigh, of Einson-Freeman Co., Fairlawn, N. J. Smeets, of Weert, is the Dutch partner in the firm.

An ATF 23-9/16 in. by 38 in., five color perfecting webfed and heatset offset press will be operated by the firm. The plant for the new company is scheduled to be completed in December 1961; it will contain 45,000 sq. ft., allowing room for the addition of three presses similar to the ATF.

Personnel for Smeets-Safran will be trained in Safran's Detroit plant. Safran officials will oversee installation of equipment, and teletypes will link the Detroit and Weert establishments. It is anticipated that volume will amount to 10 million guilder ($2.5 million) after the plant's first year. Employment will range from 40 to 70 workers.

Smeets of Weert is a 135 year old firm and is a leading producer of color lithography and point-of-purchase displays. It has teletype-linked sales offices in the five largest cities in Europe. Safran Printing Co. is owned by Hyman and David Safran. The company has pioneered in web offset printing since 1953.

The growth of four color web offset printing in Europe will be more dramatic even than its growth in the United States, according to N. Joseph Leigh, president of Einson-Freeman.

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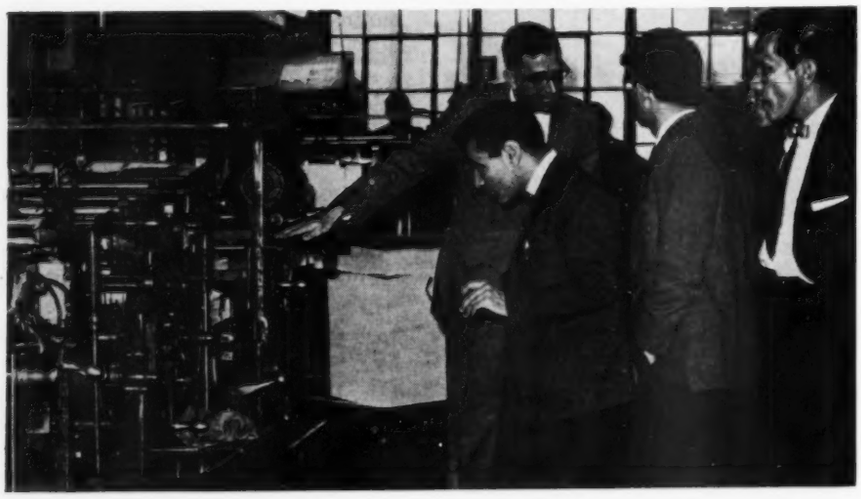
Use of special nylon material over a conventional press blanket resulted in no appreciable signs of offset on second impression in a recent experiment at a newspaper plant in England. The test was conducted by the Printing, Packaging and Allied Trades Research Assn. Over 200,000 copies were run during the test.



International Workshop Tours Printing Plant—Government purchasing administrators from 13 foreign nations were recently taken on a tour of Heer Printing Co. in Columbus, O. The visit was part of the 12 week workshop in supply management which was held on the Ohio State University campus and sponsored by the International Cooperation Administration, a U.S. government agency.

According to the PATRA report, there was no deterioration in print quality during the test. Attempts will now be made to bind the nylon mesh material to the conventional blanket in order to simplify attachment to the cylinder. The test was conducted on newsprint only; much work remains to be done on perfecting press applications, where combinations of the nylon with various anti-offset sprays must be tried.

In issuing this report, PATRA officials emphasized that the nylon mesh covering is just a cure for offset. They urged that more work be done in the area of finding the cause of the pulsations that seem to result in misregister or offset, and thus eliminate the problem at its source.

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A photographic typesetting machine that reportedly can set complex Chinese characters and Japanese syllables at the rate of 300 letters per min. has been developed by the Research Institute of Tokyo.

In operating the machine, the operator pushes a button which corresponds to a letter. An equivalent set of holes is produced on a tape which is transmitted to the typesetting portion of the machine. The perforations are converted into electrical pulses and the correct types are selected automatically. The heart of the unit is the Strobobrush which provides the exposure when the desired type on the revolving keyboards is in the proper position. An image of the desired letter is made on roll film upon flash exposure.

The keyboard on the machine has 3000 Chinese characters and Japanese syllabaries arranged in a circle.

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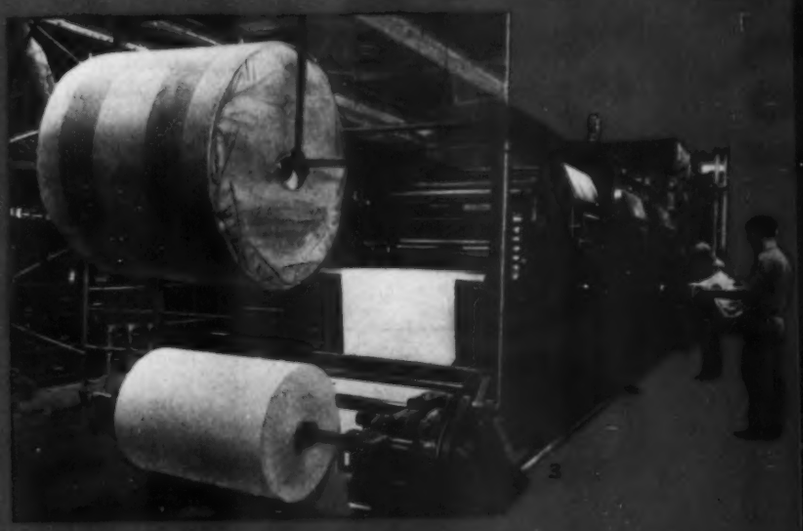
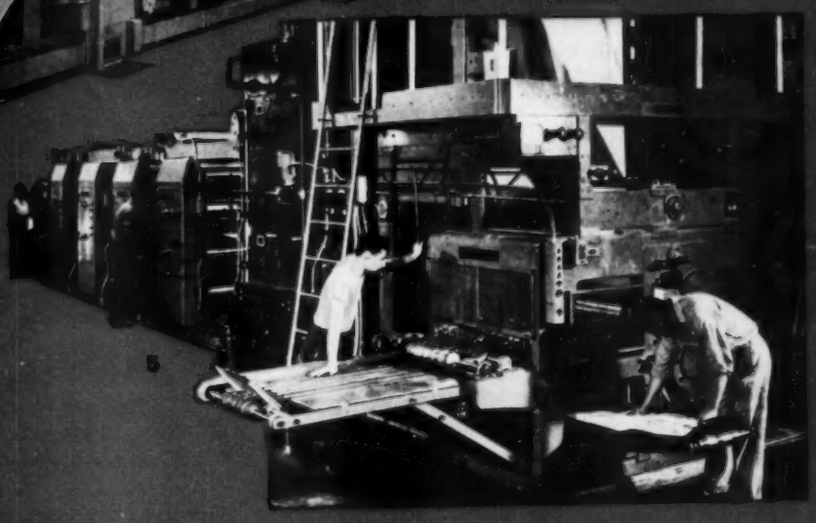
Printing equipment purchases by Austrian printers fell by approximately 10% between 1959 and 1960. This was revealed in a survey made by the League of Graphical Enterprises in Austria. Over 80% of the Austrian printers participated in the study.

It was also reported that there was a slight decrease in equipment purchases between 1958 and 1959. According to the report, the figures indicate that replenishment and modernization of equipment has, on the whole, been carried through.

continued on page 82





1 Western Printing & Lithographing, Poughkeepsie, N. Y.

2 Eastern Colortype, Clifton, N. J.

3 National Publishing, Washington, D. C.

4 Satran Printing, Detroit, Mich.

5 Majestic Press, Philadelphia, Pa.

Leaders like these are producing more...

with HARRIS-COTTRELL WEB OFFSET PRESSES

For top-quality work, at a profit, you get *more of everything* with Harris-Cottrell Web Offset. You get more production . . . up to 24,000 64-page, 8⅓ x 11" signatures per hour. You get faster delivery . . . the Cottrell folder handles runs of 1200 feet per minute. You get greater versatility . . . for printing digest magazines, tabloids, catalogs and a great variety of *folded* products with equal facility. Harris-Cottrell's line includes presses in 22¾ x 38", 35 x 50" and 43 x 64" sizes.

Perhaps a Harris-Cottrell Web Offset can open up a whole new field of business for you. Write for information.

HARRIS INTERTYPE CORPORATION

THE COTTRELL COMPANY

A Subsidiary of Harris-Intertype Corporation

17 Mechanic Street · Westerly, Rhode Island

Newspaper Web Offset Course

The web offset training program for newspaper applications at Rochester Institute of Technology has been enlarged to meet increased demand. According to Herbert Phillips, supervisor of web offset research work at RIT, the training course is designed to improve communications between suppliers and printers in the web offset field.

The largest group arrangement for the program involved 22 persons who participated in three separate one week courses. The group consisted of 18 sales and engineering personnel of R. Hoe & Co., Inc., and four representatives of the American Newspaper Publishers Assn. Research Institute. The program is designed for small groups.

Present courses are tailored to fit individual group needs and cover all steps from copy preparation, typesetting and pasteup through stripping, platemaking and presswork. Program participants operate equipment in all offset departments and publish an edition of the RIT weekly newspaper.

Information about the training program may be obtained by writing the Graphic Arts Research Department, Rochester Institute of Technology, Rochester 8, N. Y.

Litho Clubs Set May 4 as 16th Convention Date

The 16th annual convention of the National Assn. of Litho Clubs, under the general chairmanship of J. Leonard Starkey, will be held on May 4-6 at the Biltmore Hotel in Dayton, O. The convention members will be conducted through the McCall Corporation plant where they will have an opportunity to view McCall's web offset press and press preparation departments.

Business meetings will include quiz sessions and panel discussions on offset problems. There is also a complete program arranged for the ladies in attendance. Details are available from Donald N. Hurd, McCall Corporation, McCall St., Dayton 1, O.

Graphic Arts Exhibit on Tap for Wisconsin Assn.

In conjunction with the 75th anniversary of the Graphic Arts Assn. of Wisconsin, and because of recent changes which have occurred in the Graphic Arts industry, the Wisconsin organization is staging an exhibit and conference entitled the March of Progress. The conference will be held on Nov. 9-11 in Milwaukee at the Milwaukee Auditorium. According to Richard Leberman, president of the association, 175 booths will be provided for exhibits.

In conjunction with the exhibit, conferences will be held covering the newest techniques in management methods as well as discussions on recent progress in letterpress and lithographic processes.

Miller-Lauffer Counters Acquired by Lanston

Lanston Industries, Inc., has acquired manufacturing and marketing rights for two automatic counting devices from Miller-Lauffer Printing Equipment Corp. The two products are the Tally-Tab 1000, an automatic counter and tab inserter, and Countron, a pre-determined counter.

In announcing the acquisition, Carl C. Sorensen, Lanston president, predicted new markets for these products. Lanston will produce Tally-Tab and Countron at its manufacturing plant, Monotype House, in Philadelphia. The firm plans to market the line both in the U.S. and overseas.

As part of the agreement, Alvin Arnell, former vice president and general manager of Miller-Lauffer, joins Lanston as product manager. Hobson F. Miller, Miller-Lauffer president, will remain in his present position.

Los Angeles Conference

The annual production conference sponsored by Printing Industries Assn. of Los Angeles, will be held on May 6 at the Miramore Hotel, Santa Monica, Calif., Rose Wyld, general chairman, announced. Subjects to be covered will include motivating people to increase production; diagnosing production efficiency; operation improvement; positive production control through proper job tickets; space planning and in-plant production versus buy outs.

For information, contact Printing Industries Assn., 1434 W. 12th St., Los Angeles 15.

Print Education Council Prepares to Reorganize

The reorganization plan for the Education Council of the Graphic Arts Industry, Inc., proposed by newly elected president Harry E. Brinkman, has received approval from the Council's executive committee at a recent meeting in Chicago.

The reorganization proposal developed out of a recognition by the Council that its committees were much too large to permit sufficient frequent meetings. There were also too many committees to permit any particular committee sufficiently large scope to challenge its members.

The new organizational structure of the Education Council provides for an executive committee consisting of its officers and committee chairmen; a board of directors elected annually by the membership, and the following committees: Committee on Higher Education; Committee on Secondary Education; Committee on Related Education for In-Plant Training Problems; Committee on Vocational Guidance and Selection; Committee on Local-Industry Education Advisory Programs and the Annual Conference for Personnel and Training Directors.

Brinkman announced that the headquarters office of the Education Council is now located at 1411 K. St., N.W., Washington 5, D.C.

Movie on 3M Litho Plate

Minnesota Mining and Mfg. Co. announces the release of a movie film which outlines its Type S subtractive, pre-sensitized lithographic plate. The film runs approximately 21 min. and may be viewed by arrangement with local 3M representatives.

SAVE!

TAPE COMPOSITION MEANS BIG INCREASE IN OUTPUT PER MAN-HOUR

SAVE MORE!

SHAFFSTALL MAT DETECTOR ENDS TAPE-SETTING ERRORS, CUTS RE-RUNS

SAVE MOST!

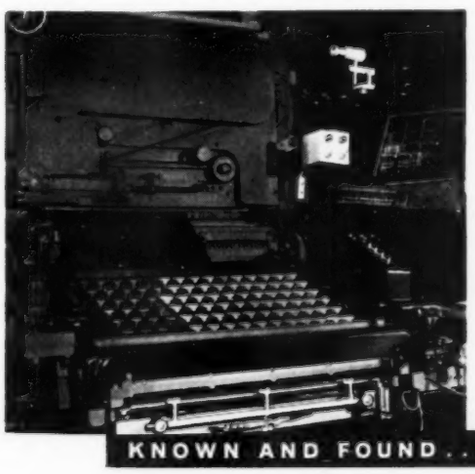
NOW—*TRANSISTORIZED* MAT DETECTOR NEVER NEEDS ADJUSTING!

New Space-Age Miracle AUTOMATICALLY pays for itself over and over in Proofreading, Resetting Economies!

Is your composing room tape-equipped? Then you already enjoy worthwhile savings in payroll—increased output per man-hour. But repeated mechanical errors may be robbing you of maximum benefits!

Shaffstall Mat Detector halts machine-caused errors *the first time*. This "mat detective" fights the crime of waste in tape composition. Used on over 25% of all tape-operated linecasting machines—cuts composing costs $500 to $1,000 per machine per year!

Now Transistorized, the *new* Shaffstall Mat Detector never needs adjusting—adapts instantly to speed-up or slow-down in machine output. Hi-Speed Cutoff saves many additional dollars. See what this *space-age miracle* can do for you.



GET THE FACTS NOW.....

SHAFFSTALL EQUIPMENT, Inc., 1717 Gent Ave. Indianapolis

SHAFFSTALL

KNOWN AND FOUND...THE WORLD AROUND

CIRCLE 11 ON CARD

For More Information Circle 11 on Reader Service Card

Molding Without Guessing

FOR the purpose of maintaining quality control when molding stereotype mats, American Newspaper Publishers Assn.'s Research Institute has developed a simple mechanical device. The stereotyper can duplicate quickly a successful molding pressure on a mat roller, even with a different molding combination. Essentially, the device is a gauge which indicates the relative impression or molding pressure on a mat roller.

Establishing this molding pressure as a reference point is desirable in all mat rolling operations, but it becomes particularly important when molding packless mats.

Because packless mats are of low density, it is sometimes possible to exert excessive pressure on the form since a harder molding combination must be used.

With Research Institute's new pressure gauge, the stereotyper can see at a glance what pressure he is using; and, once having rolled a satisfactory mat, he can duplicate it either with the same molding combination or with a different molding combination that gives the same pressure reading on the gauge. This takes a great deal of the mystery and uncertainty out of mat rolling.

How Device Functions

The mat roller pressure gauge actually measures the displacement of the mat roller cylinder bearing caps with respect to the frames, resulting from strain of the bolts and gibs with which the caps are attached.

A T-shaped beam *C*, made of aluminum plate, is attached securely to the frame and the bearing cap by two screws. The lower bearing *E* is pivotally mounted. As the relative positions of the frame and cap change, the distance between the attachment points varies, resulting in deflection of beam *C* and magnification of its movement. The magnified movement is measured by a dial indicator which is adjustably mounted to the cap at *F*.

ANPA-RI reports that two of the mat roller pressure gauges have been field tested successfully at the Detroit *Free Press* under supervision of Ferd Mier, assistant mechanical superintendent.

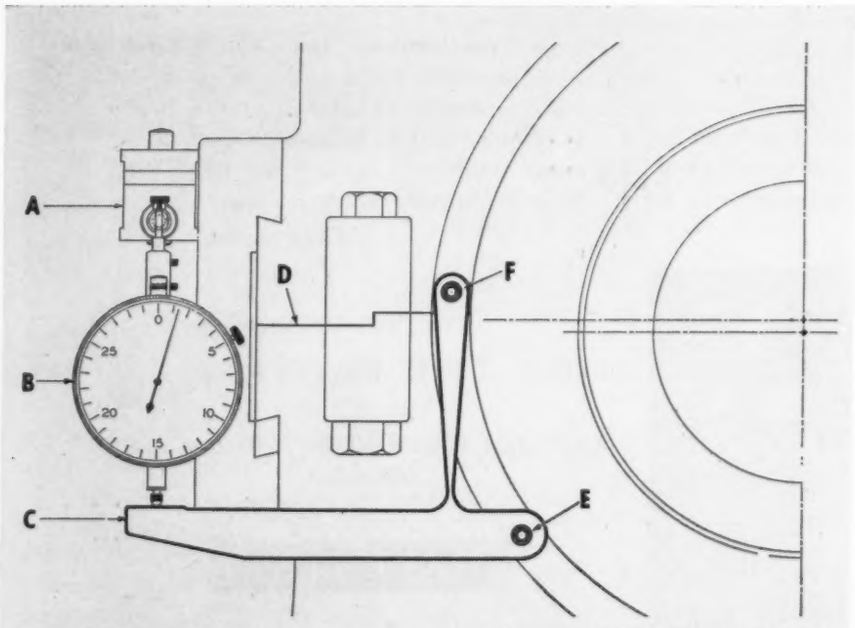
At the *Free Press* the dial indicators are graduated in ten thousandths to give precise indication. The deflection shown by the gauges is directly correlated with the amount of impression exerted on the mat.

Mier estimates that each 0.0001 in. gauge indication represents approximately 100 p.s.i. molding pressure. This relationship, however, will not necessarily hold for other machines since the strain being measured will vary. The gauge can be calibrated for any other machine.

The *Free Press* is using Beveridge packless mats in regular production, except for tabloid pages where a standard mat is used to obtain high shrinkage.

The molding combination used with the Beveridge mat consists of kraft paper, steel sheet and Tingue foundation blanket. It is molded normally with the cylinder set to give a gauge reading of 0.0015 in. to 0.0018 in. This results in a mat which is molded to a thickness of 0.033 in. to 0.034 in. and a space depth, after forming, of about 0.032 in.

Further technical information may be obtained from ANPA Research Institute, 750 Third Ave., New York 17, N. Y.



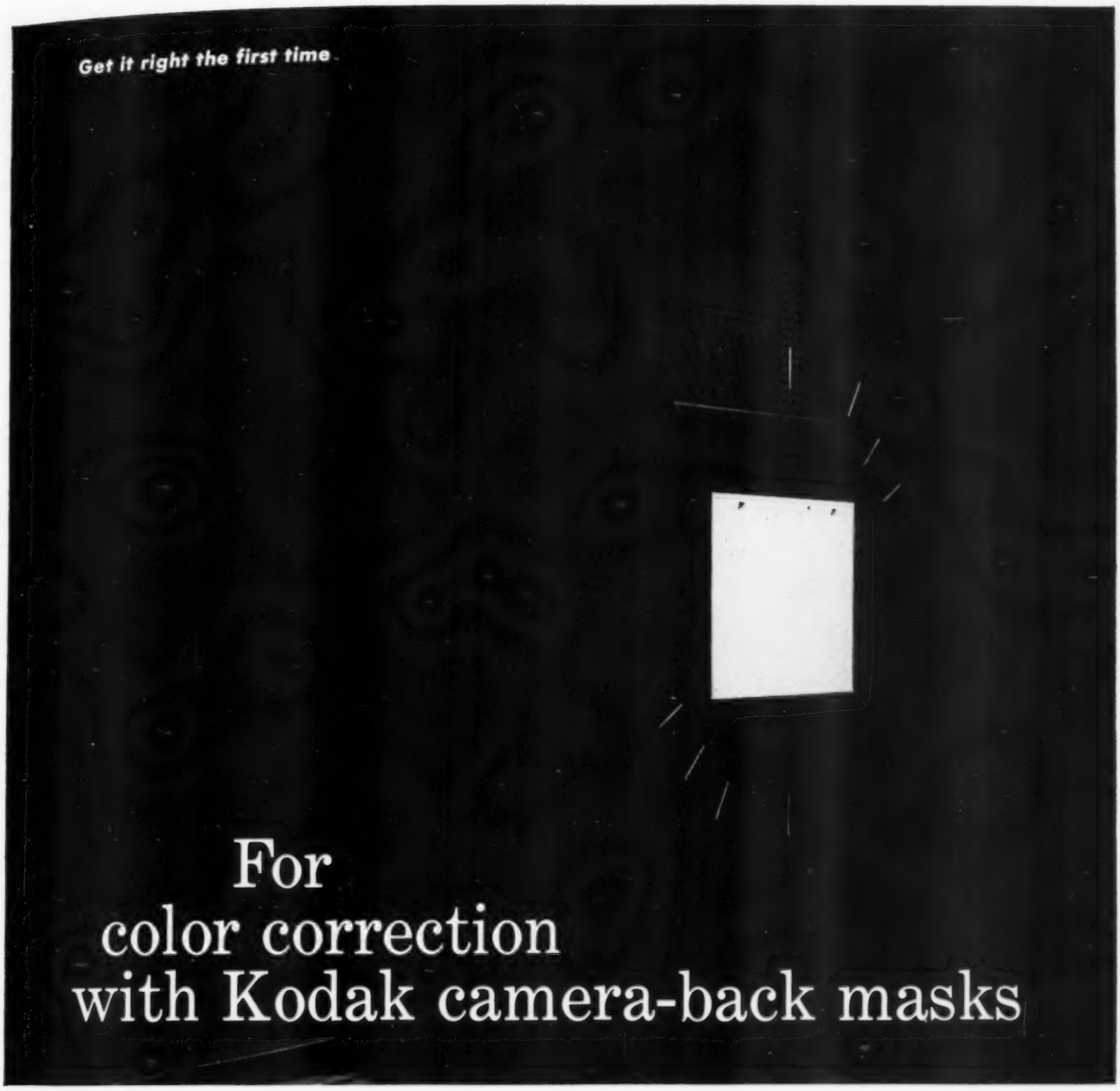
Side elevation diagram of stereotype mat roller with ANPA-RI mat molding pressure gauge attached. *A* is Starrett magnetic base; at *B* is Starrett dial indicator gauge; the aluminum right angle detection amplifying arm is indicated at *C*; at *D* is shown the matrix roller side cap joint; the bearing *E* permits movement of arm *C* when bearing cap is raised during molding pressure through connection *F*.

ITCA Creates Foundation Honoring Frank Sherman

A resolution establishing a Frank M. Sherman foundation was passed at the recent convention of the International Typographic Composition Assn. The purpose of the foundation is to establish an education fund in memory of Frank M. Sherman who died May 10, 1960. Contributions being solicited will be used as advancements or scholarships for deserving students in the Graphic Arts field.

Mr. Sherman was one of the founders of ITCA in 1920. He was executive secretary of the association from 1946-1956, at which time he became secretary emeritus and was elected a lifetime member. He was recognized as an industry leader in the Graphic Arts, having served with the association, in his own printing firm and in the equipment industry.

Get it right the first time.



For color correction with Kodak camera-back masks

Want to do camera-back masking of reflection color copy and get it right the first time?

For its 1961 line of separation and masking films, Kodak offers you a straightforward procedure where little or no guesswork is needed. Where one can make good printing separations right from the start.

What makes this technique work better than earlier ones is the compatible photographic characteristics of two new Kodak films, plus our new and more efficient filter recommendations for making masks and separations. We've also worked out specific new density aim points to help you trace quality as you go.

For unsharp masks, new Kodak Pan Masking Film on 7-mil Estar Base. No register problems. Unbacked for exposing through the base. Possible to shoot all masks and develop all at once by interleaving. Fast drying.

For separations, new Kodak Separation Negative Film, Type 2 (Estar Base). Snappy, high contrast with fine grain. Development times for all four printers are just about the same, thanks to new closely matched contrasts. (The yellow printer has a density range to match cyan and magenta printers.)

We have just published Q-Sheet 109 that tells how to do the new Kodak-recommended camera-back masking technique, using the new compatible films. Ask your Kodak Technical Representative for a copy, or write. Then ask your Kodak dealer for these films and the Kodak chemicals you need to do the job right . . . right from the start!

Text for this advertisement was set photographically.

Graphic Reproduction Sales Division

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

For More Information Circle 59 on Reader Service Card

Settles on Offset

(CONTINUED FROM PAGE 54)

tioned into first impression page locations.

The half webs from the rear side press line also can be reversed by bars. In addition, they can be interspersed between the webs from the front press line through the crossover arrangement between the press lines and a nest of bars behind the folder.

The over-all arrangement permits slitting a multicolor half web into two quarter webs and relocating them up or down the nest of bars as desired. In this way, it is said, the flexibility of color positioning is almost infinite.

Four Color Satellite Unit

The four color satellite unit (Fig. 3) is designed to print eight broadsheet pages, or 16 tabloid pages collect. When used in connection with an arch type unit, the four color satellite unit will print process color on one side of a full web with the perfected black and/or spot color printing done by the arch type unit printing press.

The satellite unit will be equipped with a double-ender arrangement to permit printing process color on both sides of a two page wide web.

The Hoe arch type web offset unit (Fig. 4) resembles a letterpress newspaper press in appearance. In this unit there are two plate and two blanket cylinders. The blanket cylinders are in contact with the web simultaneously. They serve the dual purpose of transferring the ink from the blanket to the paper and each also acts as the impression cylinder for the opposing blanket cylinder.

The arch type unit is designed to permit the addition of a color cylinder to one of the blanket cylinders. The color cylinder can be incorporated initially or added later.

Pros and Cons of Equipment

In making the analytical study of a change from letterpress to web offset printing, *Grit* established it could accomplish about 5½% savings on paper by changing from a 22¾ in. sheet cutoff to 21½ in. sheet cutoff with the new web offset press.

On the debit side, it is recognized that while the new web offset press equipment is designed to handle standard 32 lb. newsprint, *Grit* may have to use a 33 or 34 lb. stock with calendered finish.

Although offset inks yield more mileage per pound than letterpress inks, total ink costs will be greater because offset inks are considerably more expensive. It is hoped, however, that with the growth of web offset printing and improved ink chemistry that paper and ink will be decreased in cost in proportion to the growth of web offset.

There is another over-all cost factor. This is the initial investment and operating cost for web drying equipment not found in a newspaper letterpress plant. Here also it is hoped the ink makers will develop quicker drying inks for the arch type web offset units and thereby eliminate use of driers. Considerable progress in this direction, it is reported, has already been made.

To realize on the sizeable equipment investment in another direction, *Grit* is making space provision in its new pressroom to accommodate a future magazine folder at the rear of the satellite unit, and for a second satellite press unit which can be added in line with the first.

Despite recognized additional costs, *Grit* executives feel the desired tone (that of a combination newspaper and magazine) will be added to their publication. They are also confident that the idea of printing screen work as high as 110-120-133 lines, coupled with sharp color reproduction, will result in more readership and advertising. ⊙

Twenty Newspapers Form Color Association

The International Newspaper Color Assn. has been formed by the Liverpool (England) *Daily Post & Echo, Ltd.*; La Derniere Heure, Brussels, Belgium, and Axel Springer & Sohn, Hamburg, Germany. Dr. Walter Matuschke, Axel Springer & Sohn, has been appointed president of INCA, whose aim it is to increase quality, speed and precision in ROP color printing.

The association, which has been temporarily limited to 20 members, plans a program of joint research and continuous exchange of information.

Printing Machinery Export Discussed in U. S. Report

Printing Machinery, Production, Consumption, Trade is the title of the report made available recently by the Business and Defense Services Administration, U. S. Department of Commerce. The report covers operations of the printing equipment industry for 1954-59 and outlines conditions that face U. S. manufacturers in dealing with 18 foreign countries.

The report is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Cost is 35 cents.

Conference on Personnel

The Fifth Invitational Conference for Personnel and Training Directors will be held May 18-19 at the Cleveland Sheraton Hotel in Cleveland. The theme for the conference will be "People, Jobs and Profit." Discussions will be held on over-all manpower availability, employee attitudes, technological changes in relation to personnel and other social and economic topics pertaining to the Graphic Arts industry.

Plans Pacific Coast Conf.

Emphasis will be placed on new developments in printing production at the Pacific Coast Newspaper Mechanical Conference to be held Sept. 8-10 at the Jack Tar Hotel, San Francisco. According to Vince Pampanin, exhibits chairman, there will be approximately 40 exhibit booths available for manufacturers who wish to display their products. Harry Davidson, San Francisco *News-Call Bulletin*, is the conference president.

News Printed in 11 Tongues

The Heidelberg *News*, a 200,000 run, bi-monthly house organ issued by the manufacturers of Heidelberg presses, is distributed to print shops of some 90 countries. It is printed in 11 languages, and translations are in condensed form in such languages as Arabic, Finnish and Yugoslavian. There is no charge for the paper, which can be obtained from Heidelberg representatives.

For More Information Circle 43 on Reader Service Card →

"CRYING won't bring back my lost press time!

From now on I'll use this CROMWELL Offset Packing with the caliper plainly marked on every sheet!"

Who wouldn't weep if he got the wrong caliper packing every time on a rush make-ready (and aren't they all!)?

It's the sort of thing that can never happen with this Cromwell Offset Packing. The caliper is printed plainly every 10 inches on every roll or sheet. There's an arrow, too, every 10 inches, showing the grain direction. You can't put Cromwell Offset Packing on the wrong way.

Cromwell gives you other money-saving advantages, too. The packing is specially treated to prevent slip. It can't creep under the blanket. Uniformity of thickness is unconditionally guaranteed. The hard, firm surface won't thin out or "mush down" on long runs.

Sheets are supplied tailor-made to the pressman's individual specification to avoid waste of time, labor and paper in trimming so-called stock sizes to a particular dimension.

This Cromwell Offset Packing is 5 mil. Offset Packing and Tympan are available in calipers .002 to .010, also .012 and .015 in minimum quantities of one roll or 500 sheets cut to customer's specifications.

5 MIL CROMWELL

Cromwell paper company

180 N. Wabash Avenue • Chicago 1, Illinois • DEarborn 2-6320

Manufacturers of: Papers (Impregnated • Coated • Laminated • Reinforced • Flexible) Bags • Sacks • Liners • Covers (Single and multiwall construction, using all types of material to carry, cover or protect all types of products).

Please send information on Cromwell Offset Packing.

Name_____ Title_____

Company_____

Street_____

City_____ Zone____ State_____

Supervisor Mess

(CONTINUED FROM PAGE 57)

per production manager, after two years of hard work, says, "Yes, there is." Successful training programs in many companies show what can be done.

Must Adopt Policies

A noted professional trainer warns, however, that any organization going into a training program must subscribe to several policies, or they would be better off saving their money. These policies are:

(1) Training must be done as a permanent company policy. There is no short cut through high pressure conferences and seminars. Conferences and seminars can be useful if they are part of a permanent program, but are useless single-shot doses.

(2) For best results all levels of management should participate. Some good can be had from a program for lower echelons only if top management backs it wholeheartedly. However, if top management merely endorses training at the beginning and then forgets about it, the program will die. Management must be completely sincere to get through a successful training program.

(3) Training must be emphasized in every phase of the trainee's job. You can't send a man to meetings to learn the right way and then let him drift back to old habits on the job. His performance at work must be considered as part of the over-all training process.

(4) Trainees must be backed up by management with proper symbols of their value to the company—proper salary levels, company financed attendance at schools, pay for sick days, etc. Trainees must receive the actual status and dignity they are told in training sessions they must assume.

(5) In the printing industry, the work of overcoming the problems outlined here requires a professional training man who is experienced in how to get things rolling. In some cases, this need not be a permanent position on your staff. Possibly consulting help might be sufficient to start the program.

Foilcraft Installs Dycril Department—Y. Hwang (right), president of Foilcraft Printing Corp., West Hempstead, N. Y., discusses a Dycril printing plate with Jerry McPartlin, technician in charge of the new plate processing facility. The company has installed Fairchild Dycril processing equipment as part of its foil printing operation.

Above all, don't underestimate the extent of the problems or the difficulties involved. Real management training requires patient hard work and the backing of management. The man who likes to rise to a challenge, however, should find this kind of work one of the best challenges of all. ⊙

EDITOR'S NOTE: Succeeding articles will discuss better supervisory training and methods for training higher management and some results that have been achieved.

Binding Standards Sought

A task force of the Research and Engineering Council's Committee on Binding and Finishing has been established to develop standards for determining the "page pull" of perfect bound magazines, books and pamphlets. These standards are to include testing procedures and specifications for minimum acceptable adhesion. John O. McCahon, Smyth Manufacturing Co., is chairman.

Linotype School is Moved

The Empire Linotype School has expanded its teaching facilities by moving to larger quarters at 222 Park Ave. South, New York. In announcing the move, Edwin C. Jenkins, director of the printing trades school, reported the addition of new Harris and Zenith offset presses, and other modern equipment.

Student Printing Group

Printing management students at Westing Michigan University in Kalamazoo are organizing a Graphic Arts Society to promote interest among high school students in the Graphic Arts industry. Its primary objectives are to keep members abreast of new developments in the industry and to assist them in job placement upon graduation.

Presents Typo Awards

Twenty-five daily newspapers from nine states were presented awards for typographical excellence at the recent winter meeting of the Inland Daily Press Assn. in Chicago. Sponsored by Northwestern University's Medill School of Journalism, the 22nd annual contest saw 235 of the association's member newspapers judged for effective display, readability and general eye-appeal.

First place winners were: Chicago *Daily News*, Watertown (Wis.) *Times*, Logan (Ut.) *Herald-Journal*, Ottawa (Ill.) *Republican-Times* and Rockford (Ill.) *Register-Republic*.

Stops Pimpling on Zinc Plates

A process for eliminating pimpling on Dow etched zinc plates has been developed at the Providence (R. I.) *Journal* and *Bulletin*. Reported by the American Newspaper Publishers Assn. Research Institute, the technique involves increasing printing time and vigorous cottoning of the entire flat.

The problem of pimpling developed when the *Journal* and *Bulletin* employed a P.V.A. resist on zinc plates. It was found that even the cleanest appearing print made with P.V.A. resist held invisible traces of resist in the non-printing areas. These deposits resulted in pimpling when they hardened.

Many theories such as the composition of the bath and lack of dust eliminating devices were tested, but all efforts at correction proved unsatisfactory.

The solution came, said Oscar S. Candage, photoengraving superintendent, when it was noticed that one of the less experienced apprentices made prints that appeared to etch consistently free of pimples. It was found his lack of confidence in gauging printing time and fear of losing a flat through underprinting caused him to give excessive exposure to each print. The resultant heavy image required strong swabbing with cotton in order to complete development.

After testing, it was found that increasing the average printing time slightly and cottoning the entire flat eliminated pimpling without image loss or distortion. Light cursory swabbing proved ineffective; vigorous rubbing with web cotton, the application of pressure and complete coverage of the flat are necessary measures for assurance against pimpling.

Overseas Reports

(CONTINUED FROM PAGE 72)

London reports that plans are in full swing for the 11th International Printing Machinery and Allied Trades' Exhibition (IPEX) to be held at All Halls, Olympia, London on July 16-27 of 1963.

The IPEX theme will be "the Graphic Arts with the widest representation of all its facets." It was suggested at a recent meeting of the joint exhibition committee that, since visitors are expected from all parts of the world, students from various nations be trained in the fundamental language of the printing industry, and subsequently serve as interpreters at the exhibition.

At IPEX 1955, there were more than 70 foreign exhibitors. In 1963, the Printing and Allied Trades Assn. is expecting the largest representation in the history of the exhibition, which will show the progress of science in the printing industry.

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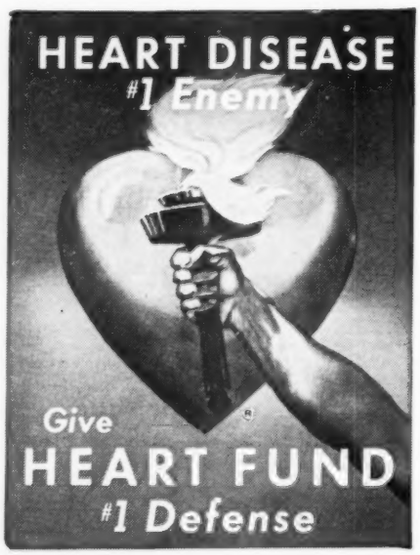
Shortage of quality equipment and continuance of manual production methods are blamed for the poor quality of book production in the Soviet Union by the *Economic Gazette*, Russia's leading economic and industrial daily. According to the report, printing presses in regional and local printing plants are of very poor quality and should be scrapped.

It is stated that even machines now in production have serious shortcomings. The Governmental Committee for Automation and Machinery Construction as well as the Research Institute for the Printing Machinery Industry are criticized for being "quite content to leave matters as they are." The article demands that greater care be devoted to printing plants and equipment and that modernization of the industry be speeded.



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The *Christian Science Monitor*, Boston, has been published in England for several months. Each day a complete set of stereotype mats is flown from Boston to London by jet airliner and then delivered at the printing plant of King and Hutchings, Ltd., Uxbridge, Middlesex. At the time publication began, it was estimated that circulation would average 7000 and that the average issue would contain 20 pages.

Gravure Workshop

The Gravure Technical Assn. announces the scheduling of two one-day workshops for gravure printing personnel in New York and Chicago. Planned for practical craftsmen, particularly in the packaging printing field, the first workshop will be held on May 6 at the Commodore Hotel in New York; the second on May 20 at the Drake Hotel in Chicago. Each will open at 10 a.m. and run to about 4 p.m. A registration fee of $15 includes luncheon.

Quality Control Seminar

Rochester Institute of Technology announces the 11th annual program of Quality Control for the Graphic Industries to be held at Towne House Motor Inn, Rochester, N. Y., on June 26-30. According to Harold M. Kentner, director of RIT's Extended Services Div., the program is designed to familiarize the individual with practical operating methods required to introduce and administer a quality control program.

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The Total Job

(CONTINUED FROM PAGE 68)

productivity. The vertical line measures the length of sheet in inches from the smallest to the largest dimension. This too, is a scale of increase and decrease in sheet lengths.

Note the curve and the points A and B. This curve plots sheet speeds and sizes in relation to each other.

The relationship between size and productivity is this: If we had a 12 in. by 18 in. sheet as shown at point A, we would run at approximately twice the speed of a sheet shown at point B which is a double size 12 in. by 18 in. sheet or an 18 in. by 24 in. sheet.

Now let's say, at point A, the 12x18 sheet was 4 pages and let's say at point B the 18x24 sheet was 8 pages. If at point A the machine will go 10,000 pieces per hr., we will deliver 10,000 four page signatures for every hour's running. At point B let's say the machine will go 5000 sheets per hr. and deliver an 8 page signature.

Please note that the relationship between point A and point B is the same. In other words, point A will deliver the same volume of pages at double the speed that point B will deliver. Point B will be delivering less sheets but double the amount of pages. Therefore, one rule of thumb is: Productivity on a small sheet size is the same as productivity at an increased sheet size. But remember, there are savings that can be had beyond this. To explain, should a rush job come in, it would sometimes be cheaper to fold it as a 4 pager, have one extra gather on the gang stitcher and come out with those 500 or 1000 books that you need quickly. Because of this untimed principle and the versatility of the folder, we can see that on an untimed machine or buckle type machine, the versatility of the fold is more important than the folder speed. Productivity on an untimed machine is equal from machine to machine. The changing factor is the sheet length and its relation to linear speed. Or, to put it simply, the limiting factor in the buckle fold is the sheet length.

Buckle folders are of more recent design. Their fold rolls are arranged like cascades. The sheet goes through these fold rolls and the point of folding is determined by the preset gauges inside the fold plate. Fold plates are slanted in the direction of the fold roll, depending upon the numbers or combinations of folds pointing upward or downward, at an angle of 45 deg. Since each middle roll performs subsequent folds, it is necessary to have a complete set of rolls for each fold. Therefore, the number of fold rolls is equal to the number of folds plus one auxiliary roller for each entrance and exit for that section.

Tension of the fold rolls is adjustable according to quality and weight of paper stock. Heavier paper requires a slight tension as opposed to more tension on lighter stock. Bible papers and other paper stocks of light weight and reduced interior rigidity are preferably best not folded with the buckle type of folding machine.

The greatest advantage of the buckle fold is that the buckle machine performs parallel folds up and down, as well as right angle folds, and almost any combination of

LET'S TALK
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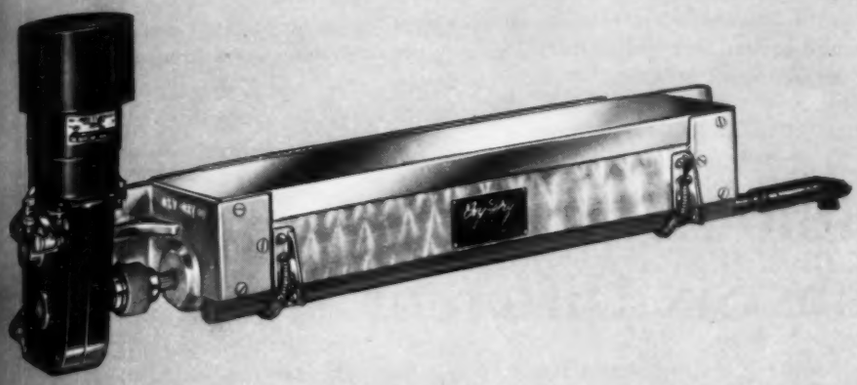
folds. Operating speed is high since speed is linear with continuous rotating movements. The speed of the buckle folder is limited by the length of the sheet to be folded, or rather its dimension in the direction of rotation. The performance of any buckle folder is expressed in feet per minute. At the present time, the maximum speed is between 350 and 375 ft. per min.

The few disadvantages of the buckle fold are primarily related to the structure of the paper. The sheet has to stay flat, throughout; there may not be any waves, especially at the corners. The grain of the paper too, is important. Folds against the paper grain are liable to be inaccurate; folds against the grain in cheaper stocks will have the tendency to crack. Registering of the sheet has to be accurate since anything that deviates from the right angle is hard to correct after folding. The reason for this is the acceleration and sheet impact against the stops in the fold plate. Finally, if the sheet is rather large, productivity decreases.

MONEY



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Now, on the other side of the fence, we have a blade or knife folder. These folders, too, are suited to certain types of work. For folding jobs of the large run, book or publication variety consisting of a large sheet with right angle folds, particularly four right angle folds, this machine should be considered.

In the knife folder, a moving steel blade is actuated by a cam shaft. This blade presses the sheet at the line of folding between rotating fold rollers. One of these fold rollers is stationary, the other is pressed against the first by springs tangentially. This movement of the roller, to and from a stationary roller is necessary to permit the folding of various kinds of paper stock without adjusting the distance between the fold rolls for every job. Since the knives in the fold rollers are always offset by 90 deg., this type of folder can only be used to make sequences of right angle folds.

Depends on Sheet Size

Performance of the machine depends upon the timed speed of the knife action which again depends upon the initial sheet size being run. The reason for this is that the sheet has to come through the first section completely before the knife can fold the second time. Thus, the limitation of performance comes from the maximum sheet.

Please refer to the chart again. As in the untimed machine, where productivity at point A and point B were constant, we have bi-sected this line now with a timed machine. Now, this timed machine will run somewhat slower or somewhat faster on various type jobs but the relationship between the timed and the untimed remains the same. That is, where this line bi-sects the curve of the untimed machine, everything to the left of the line is now less productive on an untimed machine as opposed to a timed machine. Work to the right of this line is more productive on an untimed machine as opposed to a timed machine. The most important feature of the knife folder is its accuracy in handling a wide range of light weight stocks. Texture of the paper and structure of the grain is not as important for the fold in a knife fold as in a buckle fold.

The chart shows only the relationship in basic four *right angle*

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folding 8's, 16's, 32's, etc. This is not a comparison in versatility of folds but only in machine principles. The type of machine at our disposal will influence imposition in more than one respect. First, consideration for imposition is what the folder can do best. So, we must think in terms of what the folder can do and how we can utilize the machine to its fullest. I think with these principles in front of us and knowing that machine speeds are regulated by the sheet length, we can plan our folding with this basic principle in mind. We should think in terms of folding the sheet down to its shortest dimension in the first fold plate to utilize the machine speed to its fullest.

Here is one of the things we should stay away from if possible. Try not to fold a sheet in a third or two-thirds of its length or similar opposites in proportion in the parallel section of the machine. That is, if you have a 40 in. sheet and fold only 10 in. in the first parallel section, you must run the machine slower to clear 30 in. more of sheet, but if you fold 20 in. of the same 40 in. in the first fold of the parallel section you have less sheet to clear. So, at all times, avoid folding less than the shortest dimension practical.

Utilize press gripper margins as much as possible to get lap for automatic gathering equipment. By using them on some impositions, paper need not be added to get lap.

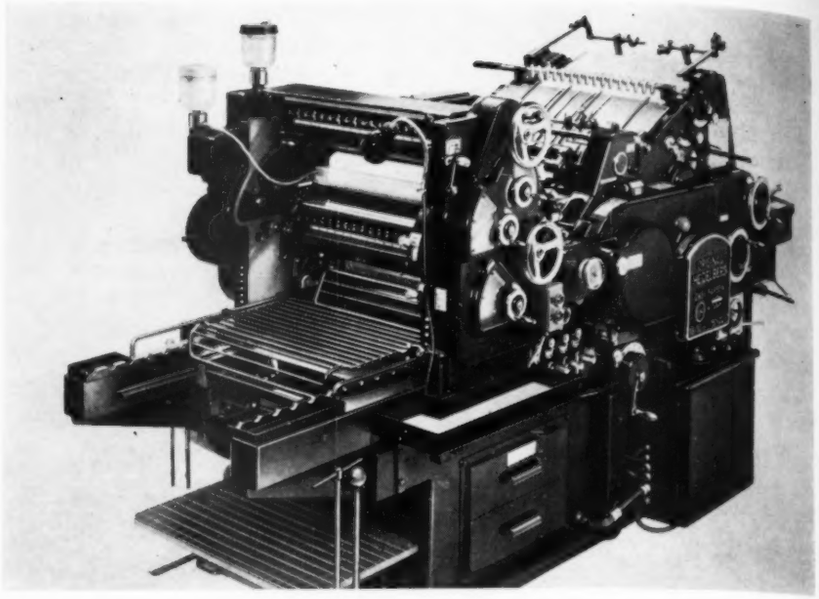
In closing, I want to stress the following points:

(1.) Strive for coordination of effort rather than fight afterwards about who did the wrong thing. By cooperation in the preplanning stages, a tough job can be made easy.

(2.) Folder speeds are regulated by sheet length. Fold the sheet to the shortest length possible in the first section of any folder. Stay away from the one-third and two-third folds—especially the latter—wherever possible.

(3.) Utilize folders to the fullest. Every time a job is improperly planned, or put on the wrong size or kind of equipment for a particular job, it costs somebody money.

(4.) Don't fall into repetitive patterns. Look for impositions that will eliminate waste and save time and money.



A new Original Heidelberg press which will print by both letterpress and lithography. The unusual two color press will also print from a flatbed form and curved and wrap-around letterpress plates. Two processes may be utilized simultaneously or a single process at a time.

Litho-Letterpress Prints Jobs Six Different Ways

A HYBRID two color litho-letterpress that can print jobs by both flatbed and rotary means has been developed by Original Heidelberg.

Unveiled to United States printers during the last part of March, the sheetfed press may be used to print in six different ways: Single color rotary litho; two color litho-letterpress; rotary wrap-around letterpress; single color flatbed letterpress; single color rotary letterpress, and two color letterpress.

According to Heidelberg officials, the combination press is the same as the 15 in. by 20½ in. two color cylinder press with two additions – a dampening system and a larger diameter shell for the rotary unit which will accommodate the 0.006 in. litho plates.

Increased Press Size

The enlargement of the sheet size of the 21 in. by 28 in. cylinder press to 22 in. by 30¼ in. has also been announced by Heidelberg. This includes the one color cylinder, two color cylinder and cutting and creasing presses in that size.

Also, the 22 in. by 30¼ in. and the 15 in. by 20½ in. cylinder presses have been modified to accommodate wrap-around plates. Presses already in the field may also be adapted to utilize wrap-around plates, according to the company. Two colors may be produced in one operation with the wrap-around plate on the rotary cylinder used in combination with the flatbed form. If hairline register is required, Heidelberg suggests that the wrap-around plate be exposed curved; etching may be done flat. Any type of wrap-around plate (zinc, magnesium, photopolymer, etc.) may be used on the press.

Inking of the rotary form on the 22 in. by 30¼ in. press is accomplished by three rollers which ink the form twice before an impression. On the 15 in. by 20½ in. press, inking is done by two form rollers which ink the form twice before impression.

Respective dimensions for the wrap-around plates for the smaller

and larger press sizes are 17 3/16 in. by 20½ in. and 25 in. by 30 3/8 in. Plate thickness is 0.032 in., and etching depth is 0.014 in. to 0.016 in. on the average line plate.

Other recent developments announced by the company are the availability of a pre-loading device for the 22 in. by 30¼ in. cutter and creaser and the opening of a research center in New York.

Direct Litho Printing

The principle of direct litho printing is followed on the combination litho-letterpress. There is no offset blanket so the plate must be wrong reading rather than right reading as offset plates are.

There is one impression cylinder, a regular press bed for flatbed forms and one rotary cylinder. Wrap-around letterpress plates, wrong reading litho plates and conventional pre-curved letterpress plates are handled on the rotary cylinder. Litho and wrap-around plates are attached to the cylinder in the same manner. Special grooved shells and cylinders are provided for pre-curved plates, rubber plates and curved electros.

The flatbed and rotary cylinder may be operated independently or in combination. When the two are operated together, the flatbed may be utilized to print a second color, imprint, number or score. In two color printing, the color on the rotary cylinder is always printed first.

There are two inking systems in the press: One is for the rotary cylinder; the other, for the flatbed form. For litho printing, there is a dampening system. Each button control raises and lowers inking and dampening system, depending upon whether the rotary cylinder portion of the press is to be used. The water fountain and dampener roller are removed when a litho plate is not being run.

The inking system for the rotary cylinder consists of two rollers which ink the plate twice before impression. Four rollers of varying diameters comprise the inking system for the flatbed form.

Types of pre-curved plates that can be used on the rotary cylinder are: True register originals, curved electros, pre-curved metal plates, etched-then-curved metal plates; flexible thermoplastic, synthetic and rubber plates.

It is reported that changeover from one type of plate to another on the rotary cylinder can be accomplished in a matter of minutes. ⊕

Mid-Atlantic Conf.

(CONTINUED FROM PAGE 70)

department would be eliminated. He championed the idea of monthly dinner meetings where the advertising, editorial and mechanical department heads could meet and iron out problems.

The mechanical superintendent should be highly paid with status to match the importance of his job, suggested Scheid. "Put the right man in the right job at the right compensation, and you have the makings of interdepartmental harmony."

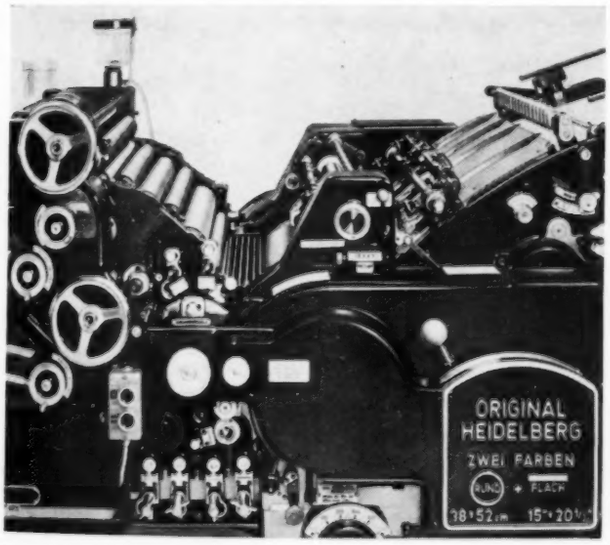
Tell the editorial department what you find wrong when you find it, was the advice of Joseph Shuman, managing editor of the Pittsburgh *Post-Gazette*, to the man in charge of the composing room. "Mature mutual respect for each other's job can only come from a more cordial relationship between the composing room and the editorial room."

Composing Cost Reductions

Dominant topic at the composing room clinic were reports by several regarding what had been done to reduce production operating costs as well as efforts made to do a better job during the past year.

Andrew Lazarchik, Latrobe (Pa.) *Bulletin*, spoke of his six day 11,000 circulation paper as having production problems similar in every respect to larger papers with some exceptions. Every effort was made to improve appearance of the *Bulletin* through closer attention to details.

Henry Garland, production manager, Pittsburgh *Press*, commented on his evening paper's experience with an unanticipated increase of 11,000 papers daily following consolidation of the two morning newspapers. It also became necessary to revise edition schedules. Production



View shows the operator's side of the combination press. Left of center is the inking system for the rotary cylinder; lower center are the four form rollers that ink the flatbed form.

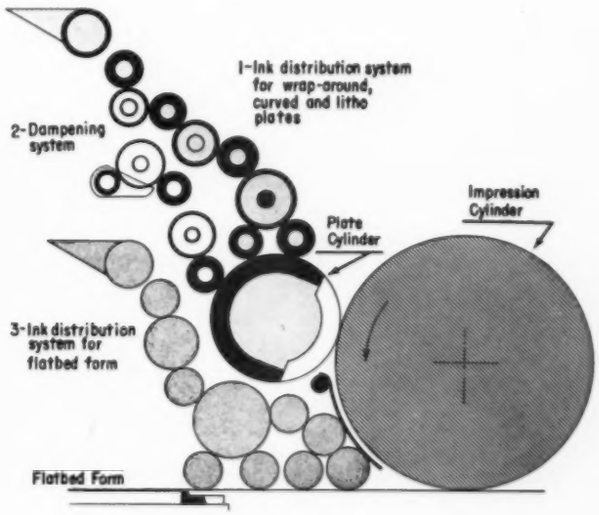


Diagram represents the inking and dampening systems of the Heidelberg press. Each system functions independently; push button controls raise and lower the rotary inking system.

problems arose as the result of changing from 1 in. to ⅞ in. mat shrinkage. Garland's conclusion: "We found it necessary to do more with what we have."

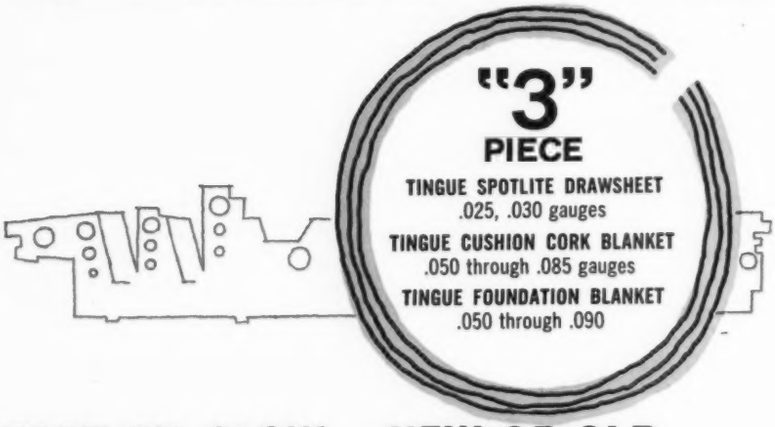
Vernon James, Morgantown (W. Va.) *Dominion-News & Post*, was asked to comment on what had been done in his plant to cut operating costs. James related that the most important accomplishment was the method of screening apprenticeship applicants. This has resulted in being able to hire excellent apprentices. While immediate benefits may not be apparent, yet in the future the company will reap the benefit in better workers in the plant.

James also commented on the proposed plan whereby his paper would print local high school papers. He and his associates are enthusiastic regarding participation both by students from the high schools and also students from a nearby university in the editing of the various publications. In this way, prospective applicants for many types of newspaper jobs can be obtained.

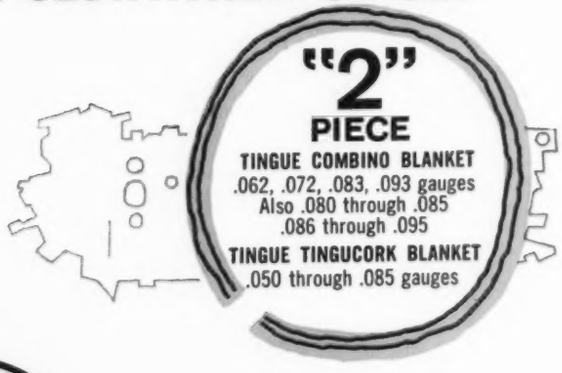
Harold Berg, Atlantic City (N.J.) *Press*, said a great deal of effort was expended in 1960 in analyzing factors influencing newspaper page costs. These factors were looked into critically. A complete study of the production operation was conducted. Among the factors mentioned by Berg were: Overset news matter, number of ad proofs allowed, deadlines, analysis of typography and white space, etc. "You can't reduce costs without supervision and cooperation," was his concluding comment.

Printing Blankets

A COMBINATION OF BLANKETS FOR ALL TYPES OF PRESSES



FAST OR SLOW...NEW OR OLD



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Specifying Proper Color

Apparently, some advertising agencies sending instructions with ROP color ads neglect to specify color according to ANPA-AAAA color plan. This thought occurred when the question: "What is meant by standard red?" was asked during the pressroom clinic. One pressroom superintendent was puzzled upon receiving an ROP color ad with vague color specifications.

The reply from the panel was that specification for the red should have been stated: "ANPA Bright Red." The speaker suggested that if the ad agency neglects to specify the color by proper name, the incident can be reported to the ANPA-RI Mechanical and Service Division.

Cracker Barrel Tidbits

A strictly informal atmosphere prevailed at the Cracker Barrel meeting of the Mid-Atlantic conference. The entire session was devoted to answering questions submitted from the floor. For this purpose a panel on the platform presented solutions. A number of the problems submitted were as follows:

Somebody wanted to know whether chases have to be type high when molding packless stereotype mats. It was the consensus of opinion that best printing results are obtained if the chases are type high. There is less permissible type high variance permitted than in molding standard mats, the chase serving as a bearer for consistent over-all depth accuracy in the molded mat.

It was explained that the refinishing of the sides of linecomposing matrices to eliminate hairlines between the letter characters on the

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slug, if done by a competent company, is practical in some cases. The speaker had reference to sans serif faces in particular. He asserted that side walls are not as substantial in new matrices carrying sans serif faces. The reason is that the set width of the characters in relation to matrix body thickness is limited. When the sides of each matrix are dressed down, little, if any, side wall remains.

One newspaper photoengraving department makes 133 line halftone fast-etched plates for customers outside the plant. Complaint was made regarding graying-out or imperfect dot formation. The answer was that in scumming-out the flat a 5% nitric acid solution applied only with a cotton swab should be used; then as bubbles begin to form, the flat should be taken immediately to the etching machine. The use of gum arabic should be avoided in the scumming out operation.

Buckling of packless stereotype mats in drying can be avoided by removing the follow-up bar from the Sta-Hi former. Also, the operator should make certain that the mat covers the screen.

TTS Matrix Font Life

During the discussion about the life of a font of straight matter matrices on a TTS operated machine, varying answers were given. Several reported that the font life is about half that in a manually operated machine, or approximately four years. This was with reference to most used characters, such as lower case e,t,a,o,i,n, etc. One plant executive reported that during the last several months he had kept a record of matrix replacements on his TTS operated machines. It has been determined that in his plant's 13 shift per week operation, an average of one-half matrix per shift replacement is made. The greatest wear affecting matrix life apparently occurs on the lower front and back lugs.

In case of a bad wrap-around on the press, someone wanted to know how an impression blanket could be repaired without losing it. In reply, a panel member said that if time is short, it wouldn't be possible to take the time to put on a new blanket. Just underlay the plate and go ahead.

N. Y. Employing Printers Will Consider New Name

After 96 years of steadily expanding operations, the New York Employing Printers Assn. is seeking a new name to match its expanded scope. Suggestions are to be submitted by member companies.

Formerly concentrated in New York City, the association's membership, in recent years, has been extended to 17 counties. The rapid growth of its lithographic division has helped the organization to pass the 1000 member mark.

The present name of the association, which employs 50 full time staff personnel, was chosen in 1920 after a merger of the New York Master Printers Assn. and the Assn. of Employing Printers. The latter group was a result of a 1916 merger between the Printers League, founded in 1906, and the Typothetae of the City of New York, founded in 1865.

Type Face Protection

The Association Typographique Internationale has announced progress in the campaign for international protection of type face designs. An eight nation committee of experts has presented a report on the problems of gaining such protection to the diplomatic conference at The Hague. The report is now under consideration by conference member states.

McCall Corp. Expands Dayton Printing Facilities

A multi-million dollar printing plant is under construction and a four acre extension is being added to present facilities of McCall Corporation in Dayton, O. The construction was undertaken in an effort to accommodate increasing demand for the Dayton facilities, which during 1960 produced 1 billion magazines.

Other current activities at Dayton include the installation of two high speed, multi-color offset presses. In February, the first of four new high speed, five color letter presses began operation; two more of these presses will be functioning by the end of 1960 and a fourth will be installed early in 1962.

Improved auxiliary services include the addition of four new bindery units. And, in McCall's Stamford (Conn.) photoengraving plant, new equipment installations are nearing completion.

Klischograph Training

HCM Corporation has established a training program for instruction in operating the Klischograph electronic engraving machine. Trainees are taught how to apply the Klischograph to meet various engraving and printing specifications. For further information, contact HCM Corporation, 80 Varick St., New York 13.

Measuring Color

(CONTINUED FROM PAGE 63)

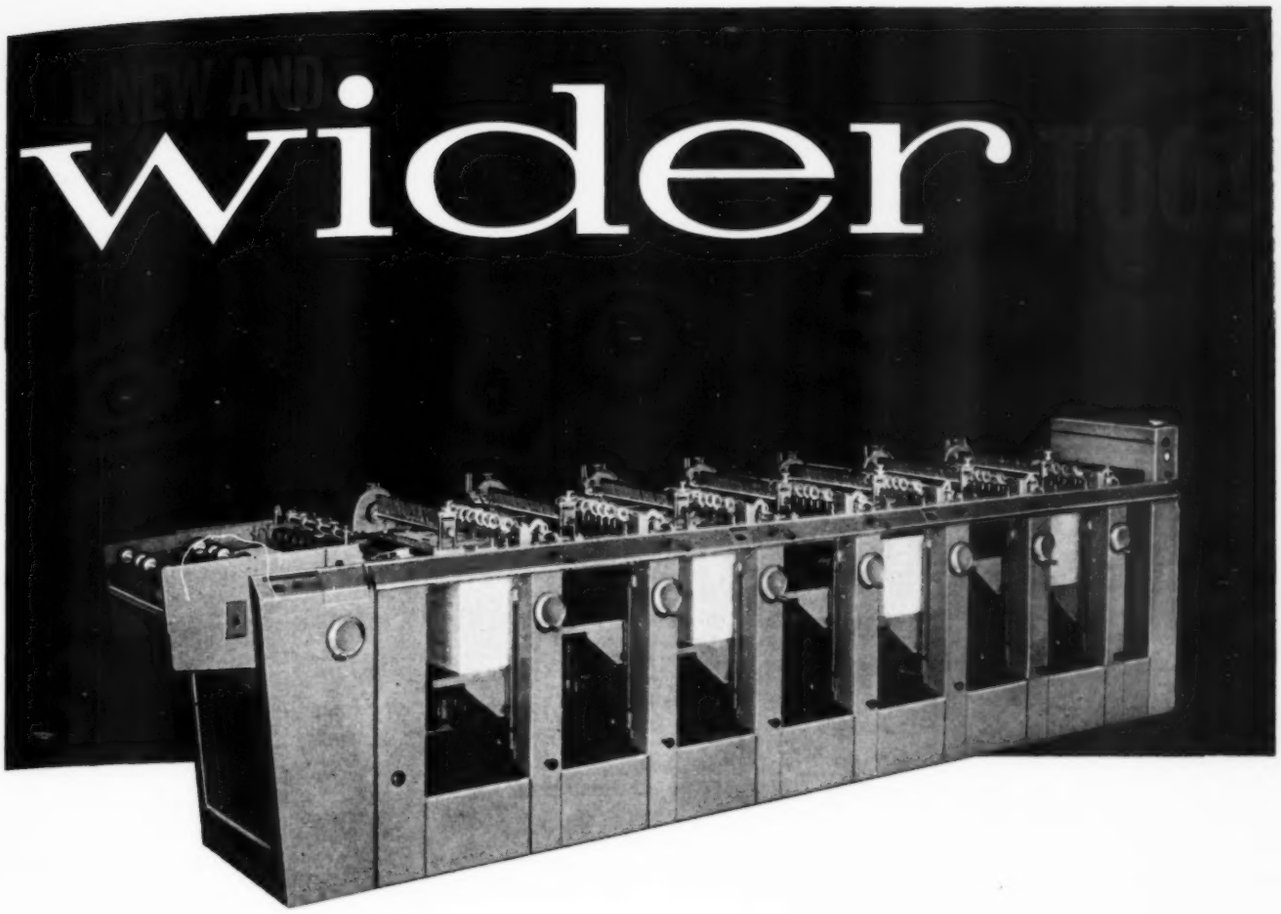
of color measurement and specification to help them control the color of the products which they purchase. One of the more progressive of these organizations is the Coca-Cola Co. The experience and conclusions of one purchaser was described by S. H. Philpot of Coca-Cola.

He pointed out that it is the responsibility of the buyer to select colors which can be matched with printing inks. He pointed out that this is not always done and failure to recognize this important step can lead to a considerable amount of difficulty.

Warren L. Rhodes, head of RIT's Graphic Arts Research, discussed spectrophotometers, colorimeters and densitometers. He explained that the spectrophotometer can be used as a reference for all other color measuring instruments.

The advantage of a spectrophotometer is that the spectrophotometric curve is a permanent, non-fading record of the color. This permanent record is desirable because all of the present physical standards change in color with time. If a spectrophotometric curve is available, it is always possible to refer back to the curve to determine if the standard has changed or if the present production is meeting the requirements.

The Color Control Seminar was attended by 47 registrants from 16 states and Canada, according to RIT officials.



Now! Speed-Klect handles the BIG sheets!

Models to handle your sheet size range		
	GATHERING AND GLUING	COLLATING
SHEET SIZE	26″ by 18″	26″ by 18″
	17″ by 15″	19″ by 15″
	17″ by 13″	19″ by 13″
	17″ by 12″	19″ by 12″
All models handle minimum sheet size 5″ by 3″		

Didde-Glaser's latest answer to the industry's collating problems – **an all-new and wider – Speed-Klect Collator** to provide the wider range you've always wanted... gathering and gluing sheet sizes from 5″ by 3″ to 26″ by 18″!

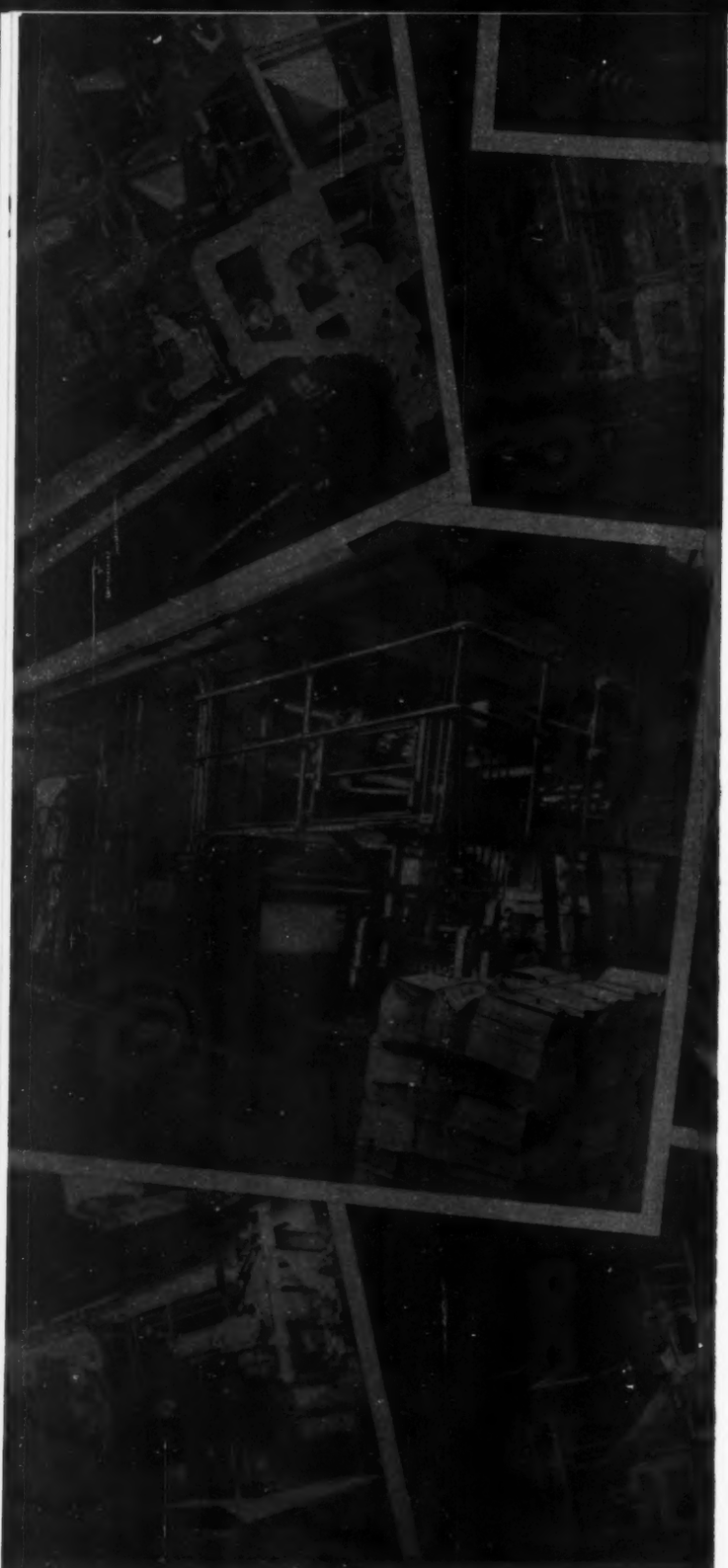
BUT WE DIDN'T STOP THERE!
The New SPEED-KLECT is faster... requires less set-up time... gives greater production. It requires fewer running adjustments – AND provides all the **extras** you've always wanted!

INVESTIGATE THIS NEW SPEED-KLECT TODAY! Address your inquiries to Didde-Glaser, Inc., Dept. PP4, Box 608, Emporia, Kansas.

DESIGNERS / MANUFACTURERS / DISTRIBUTORS OF GRAPHIC ARTS EQUIPMENT

Didde-Glaser, INC.

For More Information Circle 48 on Reader Service Card



Here are several very important points to remember when you consider Web Offset presses.

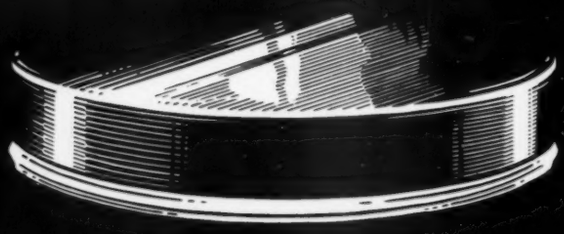
ATF IS THE UNQUALIFIED LEADER IN WEB OFFSET PRINTING. EVERY ATF PUBLICATION PRESS EVER BUILT IS STILL PRODUCING PRINTING AT A PROFIT FOR ITS OWNERS.

ATF

PUBLICATION **PRESSES** ARE THE FIRST CHOICE OF MORE LITHOGRAPHY PLANTS THAN ANY OTHER MAKE PRESS!

Here are some of the plants who have purchased ATF Web Offset presses recently:

AMERICAN TYPE FOUNDERS



Speed King®

BETTER WORK WITH FEWER INKS

CORPORATION DIVISION

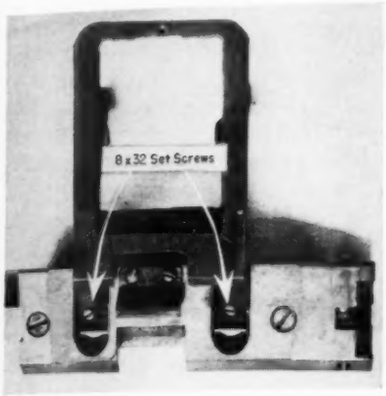
EXECUTIVE OFFICES: 67 WEST 44th STREET, NEW YORK 36, N. Y.

PRINTING PRODUCTION's IDEA FILE

SHORT CUTS · TIME TRIMMERS · HELPFUL HINTS · MONEYSAVING IDEAS · IDEA SWAPPING · GIMMICKS & GADGETS · TROUBLE ELIMINATORS

TO INSURE LONGER LIFE FOR CAPTIVE BAR LINK-PIN

Quite often when replacing a Linotype second elevator bar, it has been necessary also to apply a new



bar link. Usually there is more wear in the bar link and on the bar hinge pin than on the bar itself.

To eliminate this wear entirely I drilled and tapped for an 8x32 set screw in each of the link legs. With the set screws the hinge pin will be held securely. Any wear that occurs after this treatment will be in the bar itself.

Drill the holes with a No. 29 twist drill, 3/32 in. at one side of center from the bearing holes in the lower ends of the second elevator bar link.

It might seem to some that there would be undue wear on the second elevator bar with the fixing of the link and hinge pin stationary position. However, I believe the second elevator bar usually is renewed due to worn or damaged teeth from other causes. – *Vern L. Trumbo, Clinton (Ia.)* Herald.

FAST STRING TYPE TIE-UP

The custom of wrapping a type form with string is still with us. Probably its use will continue so long as a ball of string is in convenient proximity to the worktop. However, there is a better way to tie up type forms.

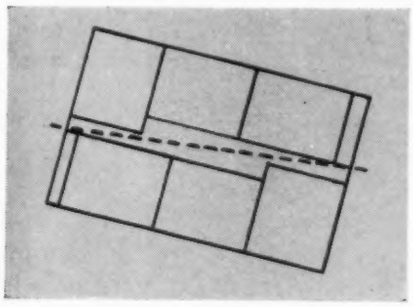
Knot the string *first* before winding around the type. The knot will catch on the corner if you are a sloppy tier. The knot also serves to identify the beginning end of the string when retying.

After winding five or six turns, twist the running end into the loops twice. Then, holding the string downwardly (I use long tweezers) give it a good stretch and it breaks off. Done with skill, this is a quick and sure method of tying a form. It can be undone for corrections easily.

Caution about string ties: Many printers wrap too many turns around a form. Five or six turns should be enough—seven is plenty. Using more turns is a waste of time —not string—and time is money. Consider the 10 or 12 turn printer! The time he spends winding the extra turns invariably is copied by the man who corrects the job. Sometimes this waste extends over many pages and many alterations, running up the cost of the job immeasurably. —*William Lovelace, advertising typographer, Minneapolis, Minn.*

CUTTING STOCK AT ANGLE

This system prevents wasting a large area of stock when you have an odd size job. The usual cutting method would yield only five pieces. The diagram shows how to get six



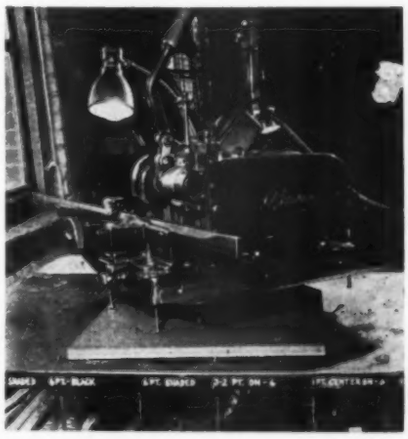
pieces. In this example, the job size is 9¾ in. by 12½ in., and the sheet size is 24 in. by 36 in. First make the angle cut, then simply cut each half of the sheet as shown.—*John V. Moran, teacher, Tilden Technical High School, Chicago. Courtesy Kimberly-Clark Corp.*

SUNKEN PAGE FOLIOS

Slug folio lines bearing page numbers are a real convenience to the man doing the makeup of a form. However, on occasion a customer will specify that the job is to be printed without page numbers. In such instances, we cut about 6 pts. off the base of the slug to sink it below type high. It won't print, of course, but it's there for reference in preventing page transpositions.—*Richard J. Fastner, editor,* Cloud Chaser Magazine, *Saint Cloud, Minn.*

MOUNT MITERER ON SWIVEL

In our composing room each of the Rouse rotary mitering machines is mounted on a swivel on top of the material rule rack. The rack is open



from either side to permit ready access to the material beneath the mitering machine. Each of the machines can be rotated 180 deg. A mitering machine is centralized between every four frames. Each of the ad compositors is only four steps away from material cabinet and machine. Cost of making the change for each machine was approximately $5.—*James Robinson, Kansas City (Kan.)* Kansan.

PRINTING DUOTONES

Want to save your clients the extra cost of two-color process plates and still achieve extremely effective duotone reproduction? Try using the same halftone in both forms, printing one over the top of the other. The result will be beautiful duotone reproduction at no extra cost other than the additional work re-

quired in making up the color form. However, it is necessary to set the halftone in the color form *slightly* off register in order to maintain uniform color tone on the printed sheets. Incidentally, variations of this same technique have been used in offset lithography with fine results. — *T. P. Wright, Production Mgr., Keelor & Stites Co., Cincinnati, O. Courtesy Kimberly-Clark Corp.*

REAM PAPER DIVIDER

Newly opened reams of paper can be divided quickly into 100 sheet lots by jabbing a four-prong metal gadget into the ream. We use other

dividers, made by our local tinsmith, to divide a ream into two parts and also into three parts. These gadgets are useful on the paper cutter and especially so in padding. They are real time-savers for us. — *Walter Mitziga, South Shore Printers, Chicago. Courtesy Kimberly-Clark Corporation.*

For the Reader

A chance to be paid for ideas which have netted savings in time, money and effort in your printing plant is offered readers of *Printing Production*. If your idea is accepted for publication it will be printed in the Idea File, a regular *Printing Production* feature, and a check will be mailed to you.

Send as many as you wish to: Idea File Editor, *Printing Production*, 1276 W. 3rd St., Cleveland 13, O.

TO PREVENT NICKS SHOWING WHEN PRINTING WOOD TYPE

While printing a large sign for a rush order, we found that the wood type letters had nicks in their faces. These nicks caused imperfect print of the otherwise bold face type. We did not want to replace the type nor take the time in attempting to patch the nicks with adhesive. We found it to be a simple matter to smooth the ink into the nicks with the eraser on a lead pencil. The wood type then printed satisfactorily without any trace of the nicks showing on the printed posters. — *Richard J. Fastner, editor,* Cloud Chaser Magazine, *St. Cloud, Minn.*

RELIEVE CRAMPED SPACE

We are cramped for working space after installing a new offset printing press. Recommended: Have Department make new layout for more effective use of space, with provision for some double-tiering of stock, using stacker trucks; consider balconies if high ceilings; reduce space used for storage of type forms by pulling repros, then killing forms which have reprint possibilities in sufficient quantity to make litho plates practical.—*By courtesy* The Imprint, *published by New York Employing Printers Assn.*

This Bar Gives Your Folder COMPLETE FREEDOM from STATIC!

The Simco "Midget" electronic static eliminator, installed on your folder, is *guaranteed* to end your static problem, produce perfect, static-free signatures! The "Midget" consists of a power unit and one or more static bars —designed to fit any machine. Though guaranteed to be the most effective neutralizer available for folders, presses and other graphic arts machinery, the "Midget" is the least expensive of all static eliminators. Why not write for full facts today?

Simco is America's Largest Manufacturer of Anti-Static Equipment

the SIMCO company
920 Walnut Street, Lansdale, Pa.

For More Information Circle 185 on Reader Service Card

UP TO 77-INCH SHEETS...

under control

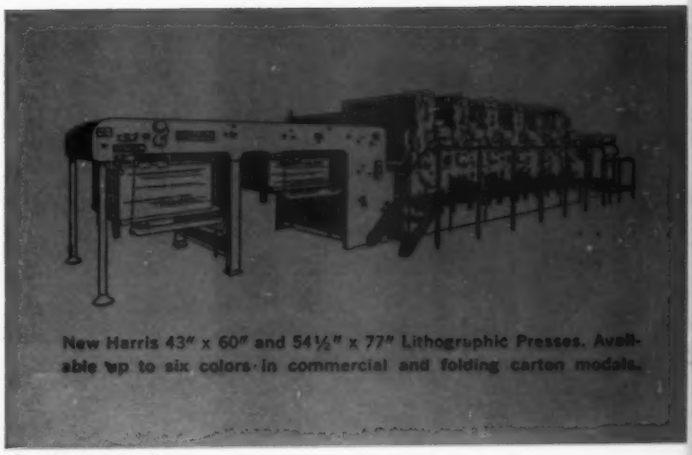
EVERY INCH OF THE WAY

Control the variables in printing, and you go a long way toward controlling costs, quality and output.

Built into Harris 60″ and 77″ presses are features that respond instantly to changes in operating conditions . . . features that insure stability during feeding and registering, sheet transfer, lithographing and delivery — four key zones to quality lithography at low cost.

We call this Harris *Control Zone Design.*

It's a good thing to have in your next press. Ask your Harris man for the complete Control Zone story . . . let him show you why *a man does his best work on a Harris!*



New Harris 43″ x 60″ and 54½″ x 77″ Lithographic Presses. Available up to six colors in commercial and folding carton models.

HARRIS INTERTYPE CORPORATION

HARRIS - SEYBOLD

A Division of Harris-Intertype Corporation

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EQUIPMENT AND SUPPLIES

You may easily and quickly obtain additional information on the new equipment, supplies and services mentioned on these pages by completing the special Reader Service Card conveniently found in this issue.

SPACEBAND TREATMENT RESISTS METAL ACCUMULATION

A product for the treatment of spacebands on linecomposing machines has been announced by Parko Company, Inc. The product is supplied in liquid form in cans. Manufacturer states that after treatment on a machine spaceband sleeves have resisted metal accumulation for a minimum of 10 days; another test indicates that the sleeves resisted metal accumulation up to four months of intermittent operation.

A set of spacebands which is to be treated first must be cleaned and polished. Next the bands are heated. They are then dipped into the Parkoplate solution. After drying, the spacebands are ready for use. CIRCLE No. 267 ON READER SERVICE CARD.

McCAIN SADDLE BINDER FOR LONG PUBLICATION RUNS

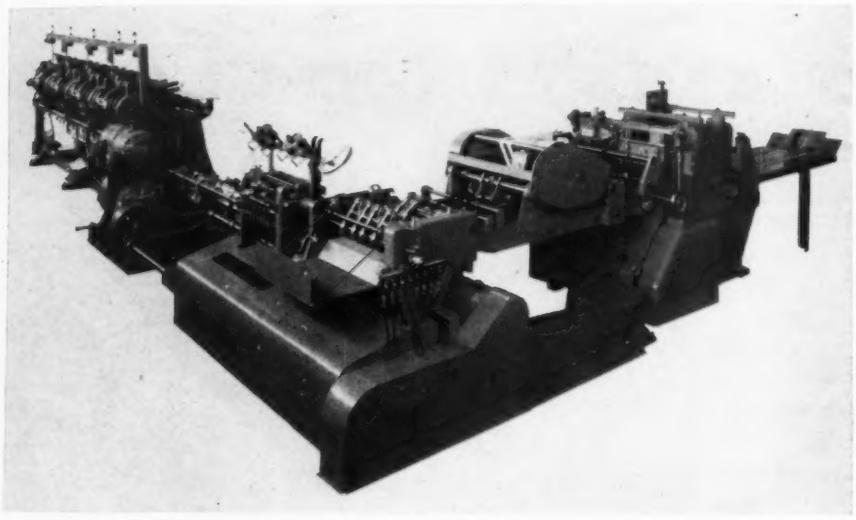
Specifically designed for long publication runs, the new McCain Unitized saddle binder, recently announced by the Dexter Company, Div. of Miehle-Goss-Dexter, Inc., makes use of automatic signature feeders that are individually driven and timed to match variable chain spacing. This permits each size publication to be stitched and trimmed at its own optimum production speed, says the manufacturer. The in-line machine comes with specially developed McCain caliper, stitcher and three-knife trimmer. Depending on the nature of the job, sustained speeds to 12,000 per hr. are said to be practical.

The binder, not designed as an all-purpose machine, is available in two size ranges: 5 in. by 8 in. to 11 in. by 15¾ in. or 11 in. by 18¾ in., trimmed. CIRCLE No. 252 ON READER SERVICE CARD.

COLLATOR AND INSERTER FOR COMMERCIAL PRINTERS

The new Cutler collator is designed for commercial printers who prepare and mail large quantities of printed material. According to Cutler Mail Chute Co., the machine will collate material with assorted enclosures, such as booklets, post cards, etc., at speeds to 4000 cy. per hr. and insert the enclosures into 6¾ in. by 9 in. to 9 in. by 12 in. envelopes. The inserter also serves as a nester.

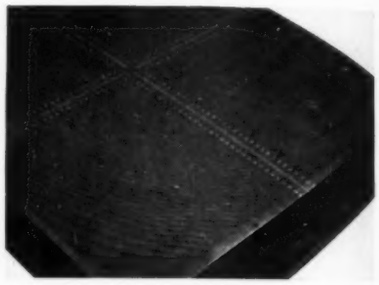
Other models are rated to collate at up to 5000 cy. per hr. Some models collate, stitch, fold and trim booklets with any number of pages and any type or weight of paper. The machine is top loading and handling components function without reciprocating motion. Electronic controls stop the machine and indicate source of error in the event of missing or double-sheeting. CIRCLE No. 256 ON READER SERVICE CARD.



The McCain Unitized saddle binder by Dexter Company, Div. of Miehle-Goss-Dexter, is designed with automatic signature feeder and specially developed caliper, stitcher and trimmer for long publication runs.

FILM REGISTER SYSTEM USES LOCATING PINS

A film register system for process cameras, utilizing locating pins which can be screwed in and out of position, is now available from Robertson Photomechanix, Inc. The round register pins,



0.250 in. diam., are built into the vacuum film holder of a Robertson camera, located in accordance with standard film sizes. However, according to the manufacturer, they may be screwed in or out of position freely to avoid interfering with various size back masking jobs.

Since these pins are adjustable to any height, from flush mounting to 0.062 in., they can be set for one or more layers of film without endangering the surface of a covering material such as a contact screen. A precision punch is also available for the system. CIRCLE No. 258 ON READER SERVICE CARD.

LITHO PLATE WIPE MATERIAL

A new wiping material for processing all types of wipe-on and other litho plates has been developed by Kendall Company, Fiber Products Div. Known as Webril Appli-Pads, the material is basically designed to apply coatings to the larger wipe-on plates and has also been found to be satisfactory for color proving.

The new technique is said to keep hands clean and stain-free while being used. The material comes in a dispenser box and may be torn to desired length. A special applicator attachment

New... from Vandercook!

THE SIMPLE PRECISION

LOW PRICED PROOF PRESS

This new Vandercook *Simple Precision* SP20 is no ordinary proof press. It is a precision machine in every respect—built to the same rigid quality standards as are all Vandercook machines.

Five Reasons... the Vandercook *Simple Precision* SP20

Proof Press Excels in Features, Value and Performance...

1. Ruggedly built to Vandercook's proven standard of quality, and to give long, trouble-free service.
2. Inexpensive, yet designed for pulling quality proofs for reproduction purposes —including transparencies.
3. Equipped with not only a very efficient power driven inking system but, in addition, an automatic washup.
4. Will take forms up to 19" x 26"—large enough for a full newspaper page— and a maximum sheet 19½" x 28".
5. Has large form capacity, yet is so compact it requires no more than 3'2" x 7'4" floor space.

VANDERCOOK & SONS, INC.

General Offices, Research Laboratory, Demonstration Room and Factory
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Western Sales and Service
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the New Vandercook Simple Precision SP20 Proof Press

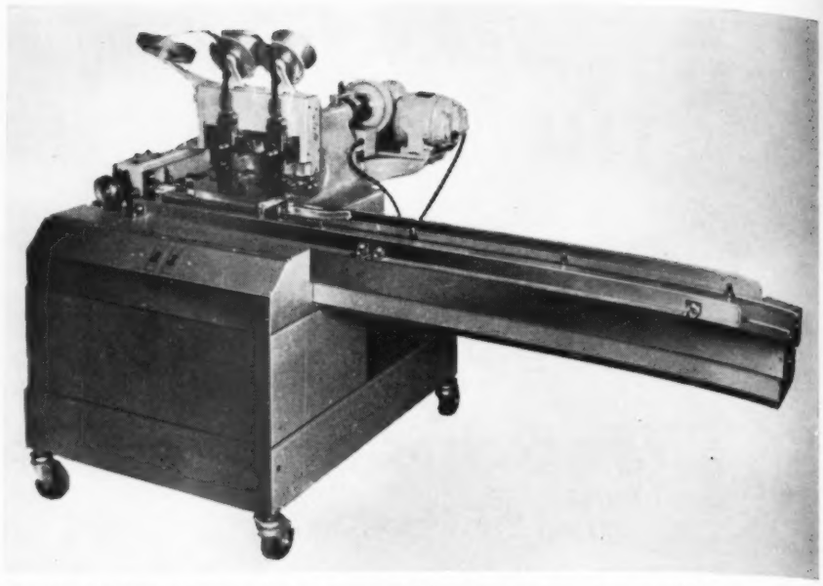
For More Information Circle 210 on Reader Service Card

accompanies the Appli-Pads and is designed like a gripping device to protect hands from contact with the wipe. CIRCLE NO. 278 ON READER SERVICE CARD.

INDEPENDENT WIRE STITCHING UNIT FOR USE WITH COLLATOR

Wire stitchers, which have been designed to operate independently of any mechanical connection to the collator, are available from Didde-Glaser, Inc., for use with sheet and signature collators. The stitcher receives sets from the collator delivery and places one or two stitches on either the top or side of delivered sets ranging from 4 in. by 6 in. to 9½ in. by 14 in.

Additional length is provided in the stitcher's conveyor table to provide for handcarrying of additional material to that which is being gathered. The stitcher is available in two models. The Model 156 ¼ in. stitcher (shown) with a stitching thickness of two sheets to ⅛ in. (optional stitching heads available for thicknesses from ⅛ in. to ¼ in), and Model 157 ⅜ in. stitcher with a stitching thickness range from two sheets to ⅜ in. Both stitchers are rolled-up units which operate on 115 V. a.c. CIRCLE NO. 283 ON READER SERVICE CARD.



The Model 156 1/4 in. stitcher from Diddle-Glaser, Inc., has a thickness range of from two sheets to 1/8 in. and to 1/4 in. with optional head. It operates independently of mechanical connection to the collator.

NEW ANTI-STATIC DEVICE CLEANS PRINTING SURFACES

The Simco anti-static cleaner combines a brush, a shockless static bar and a suction hood which operate together to remove dust and dirt from paper and other surfaces which are to be printed. Simco Company states that the paper is first mechanically brushed to remove dirt and dust, then neutralized to prevent re-attraction of the dust. The suction picks up any remaining dirt that the brush has left.

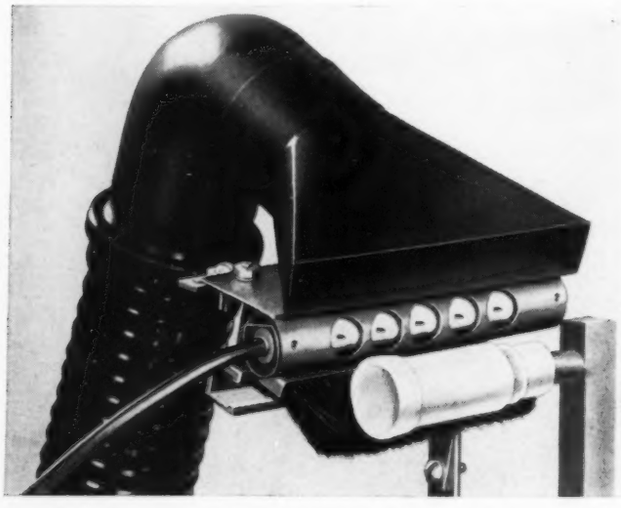
The cleaner is available in any effective length for use on various materials. The static bar may be energized by 110 V. or 220 V. a.c. A blower is available for the suction hood. CIRCLE NO. 263 ON READER SERVICE CARD.

EDGE CARD DEVICES FOR COMPOSING LISTINGS

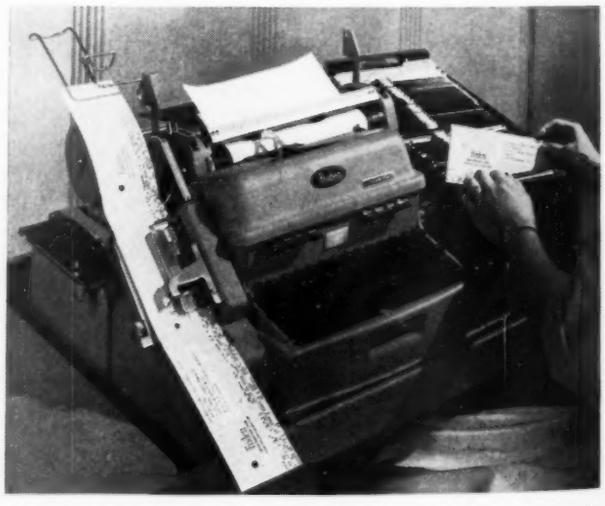
The Justowriter, manufactured by Friden, Incorporated, is now available with edge card punch and edge card reader for preparation of listings in any sequence for duplicator or offset printing. The edge cards are the same as address and item cards in data processing systems. Edge cards can be code-punched in continuous form, then separated, filed and run over in any order.

Each listing is first typed on a Justowriter AA Recorder. Continuous pregummed labels are created, and simultaneously, the identical information is code-punched into prefolded, continuous edge cards. Upon completion of the operation, the labels are affixed to corresponding cards. The cards are then cut into separate listings and filed.

At the time the listings are to be printed, the required cards are run through the reading unit of the AA Recorder. Master paper copy sheets are thus produced or repro copy for printing can be prepared at this time. The information being read from the cards can also be punched on a continuous



The Simco Company introduces an anti-static cleaner which combines a brush, a shockless static bar and a suction hood for the removal of dust and dirt from prospective printing surfaces.



With the Justowriter edge card punch and edge card reader, listings in any sequence can be quickly prepared on coded cards for cold-type composition. The machine is manufactured by Friden, Incorporated.

paper tape during the preparation of the master copy sheet. Tapes and cards may be used interchangeably in the reader unit.

Should the application call for justified composition, the tape can be inserted in a Justowriter Reproducer for automatic copysetting at 100 words per min. For all listing requirements, Justowriter offers a selection of type styles and sizes, including a new 9 pt. size. CIRCLE No. 266 ON READER SERVICE CARD.

PRESS DRIVES EMPLOY CYPAK CONTROL ELEMENTS

The Hurletron printing press drive, manufactured by Electric Eye Equipment Co., contains Cypak control elements which perform functions previously associated with relays. Manufactured by Westinghouse Electric Corp., Cypak emits control and transducer signals which are strengthened by transistor and magnetic amplifiers which in turn regulate the control windings of power reactors. Reactor output is converted to d.c. by full-wave, 3 ph. silicon bridges to the motor armatures and fields.

Speed changes are initiated by a small pilot motor which rotates two transducers through 90 deg. movements to control motor armatures and fields. The Hurletron drive system is available for all sizes of webfed presses in ratings from 50 to 400 h.p. CIRCLE No. 260 ON READER SERVICE CARD.

VISCOSITY CONTROL SYSTEM FOR GRAVURE, FLEXO INKS

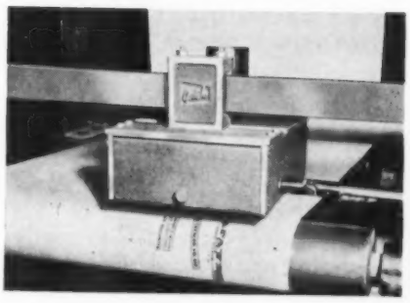
A viscosity control system designed for measuring low viscosity inks, such as encountered in rotogravure and flexographic printing, has been announced by Crosfield Electronics, Inc. Known as the Viscometron, the viscosity control is said to provide accurate measurements of viscosity and will hold viscosity to narrow tolerances even when the inks are close to viscosity of the solvents being used.

The Viscometron is available as a simple monitoring unit which shows viscosity changes on a meter, or as a system which adds solvent as required to maintain viscosity within pre-determined tolerances. Also available with the system is chart recording equipment for keeping a continuous record of viscosity and tank level controls which add ink to ink tanks automatically.

The viscosity measurements are shown on control panels which indicate variations in terms of increase or decrease from a pre-set level. The viscometer is accurate to 0.05 centipoise in the common ink ranges of from 0.25 to 0.50 centipoises. CIRCLE No. 250 ON READER SERVICE CARD.

FLEXO PRINTING ATTACHMENT FOR WRAPPING MACHINES

A flexographic printing attachment, called a Rolaprinter, attaches to a wrapping machine and prints wraps during the wrapping operation. The attachment, made by Adolph Gottscho, Inc., uses fast drying fluid ink in a fully enclosed fountain and is designed for automatic operation. It can be driven by the parent machine, to which it is attached, or by friction contact with the web. Repeats can be changed readily for different wrapper sizes, and the use of variable circumference plate



rolls makes the unit suitable for a variety of cut-offs. CIRCLE No. 272 ON READER SERVICE CARD.

THE END OF A PERFECT ZINC ETCHING DAY

Vitaplate, VitasolV, of course!

...Available through your Imperial Representative

Imperial

IMPERIAL TYPE METAL COMPANY

CHICAGO 50 NEW YORK 7 PHILADELPHIA 34

For More Information Circle 101 on Reader Service Card

ANGLE CUTTING SYSTEM FOR COMPOSING ROOM SAWS

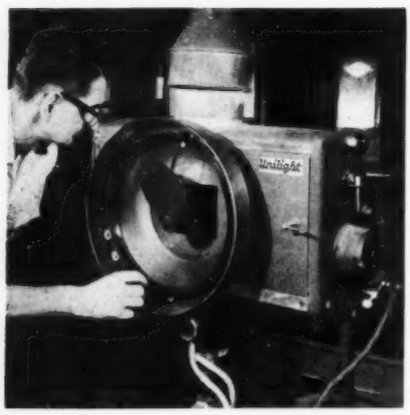
The Cover-All Angles protractor, states Gerald H. Cover, can be used quickly and effectively by any compositor for cutting angles on the composing room saw without the need for mathematical figuring.

The instrument consists of a card enclosed in a transparent plastic case, approximately 5 in. wide by 2½ in. On one side of the card is printed a protractor showing the angles in degrees. On the other side of the card is printed the table for converting degrees into picas and points.

Reference is made by the compositor to the protractor and table when cutting strip-cast rules, borders, slugs and stereo base material. Eight examples are illustrated and discussed by Cover in a bulletin. Included in the descriptions are instructions for making angled boxes, display fractions and arrowheads. CIRCLE NO. 273 ON READER SERVICE CARD.

POINT-LIGHT EQUALIZER FOR UNIFORM COPY LIGHTING

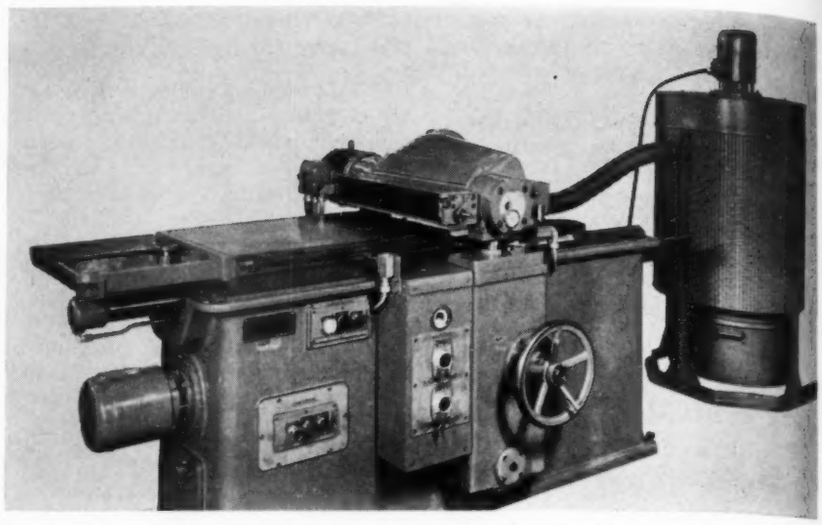
Unilight, a point-light equalizer for use with Grafarc printing lamps, is designed to make possible uniformity of



light intensity over an entire copy area. The equipment is manufactured by Strong Electric Corp. and is currently being used by Detroit Gravure Corp. It is claimed to reduce spoilage in reproduction of finest line and screen patterns. CIRCLE NO. 275 ON READER SERVICE CARD.

LINECASTING MACHINE SERVICE

Rich & McLean, Inc., offers a reconditioning service for first elevator heads of linecasting machines. Upon receipt at the factory, the unit is completely disassembled, worn parts replaced and the two main jaws are welded, straightened and remachined in the same manner as a new assembly. CIRCLE NO. 268 ON READER SERVICE CARD.



Huck engineers have developed a rotary plate shaver with a stroke speed of 9½ sec. forward and 6.9 sec. reverse. A full bed of plates can be shaved in about 9½ sec. with a bed travel of 38 in. to a reported thickness within 0.001 in.

ROTARY PLATE SHAVER HANDLES BED OF PLATES IN 9½ SEC.

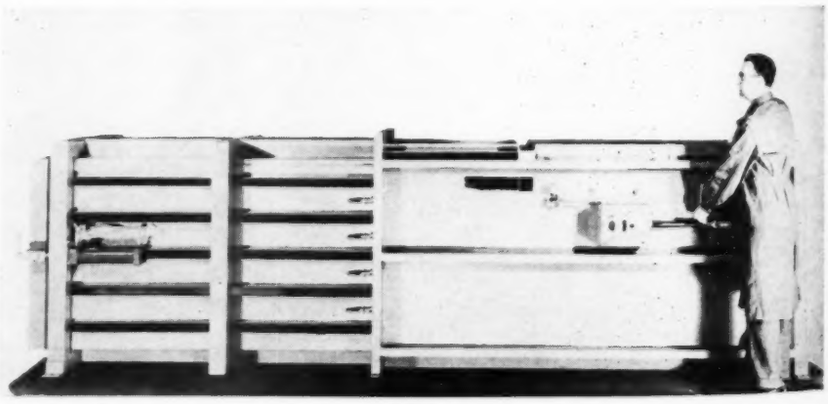
A rotary plate shaver for shaving stereotypes, electrotypes, plastic plates, stereo base and wood base has been developed by Huck Company. The Huck rotary plate shaver handles plates up to full bed size of 19¼ in. by 28 in. from 16 ga. to over type high. Single or smaller plates may be ganged up and placed against the end and side stop and then against each other.

A full bed of plates can be shaved in about 9½ sec., with a bed travel of 38 in., to a reported uniform thickness within 0.001 in. The operator may set the machine by a selector switch, to be controlled by push buttons for the forward and reverse travel of the bed. The controls may also be set for automatic return of the bed after completion of the forward stroke. The cutter head automatically resumes the original position when the bed returns to the start position. Continuous operation is thus provided for.

The dimensions of the shaver are 95½ in. long by 49 in. wide by 47 in. high. It has a maximum plate length of 28 in. and plate width of 19¼ in. with a maximum plate thickness of 1 in. The forward stroke takes 9½ sec., and the reverse stroke takes 6.9 sec. Maximum depth of cut is 0.015 in. on a fully loaded bed with one pass. Narrower width plates and/or slower table speeds permit deeper cuts. CIRCLE NO. 284 ON READER SERVICE CARD.

BALING PRESS FOR PAPER AND BOXBOARD WASTE

A baling press which manufactures a bale of paper, chipboard, boxboard or corrugated waste material every 24 seconds has been introduced by Lake Engineering Co. The Lake Baler is for use in printing and paper converting plants. Waste material is fed into a feeder-hopper at the top center of the machine, either by hand or conveyor belt. The baler presses the waste into a 72 in. by 42 in. by 30 in. bale, which



Lake Engineering Co. has designed a baling press for paper waste that will produce a bale 72 in. long by 42 in. high by 30 in. wide. The machine can also be set up to function automatically.

is contained by five 15 ga. baling wires.

The press is protected from operator abuse by a safety by-pass in the hydraulic circuit. The baler can also be set up to function automatically, calling the operator back to the machine by buzzer after a finished bale has been formed. The 72 in. Lake Baler stands 50 in. high, is 41 in. wide and 14 ft., 9 in. long. It is also manufactured in four smaller sizes. CIRCLE NO. 281 ON READER SERVICE CARD.

PLASTIC BINDING MACHINE WITH AUTOMATIC CONTROLS

Automatic cycling, adjustable to variable speeds, is featured in GBC Model 316 EB Electro-Binder, a new all-electric plastic binding machine developed by General Binding Corp. Production rates with the new machine, according to the manufacturer, can now be adjusted to each particular task

and geared to individual operator output.

The unit occupies 2 sq. ft. of desk space. It will bind books in a variety of sizes and lengths and in thicknesses from 3/16 in. to 2 in. Cycling adjustments are made on two control knobs: One sets the time for loading of binders; the other is for the actual binding operation. The control panel at the front of the machine permits manual foot operation when desired. Plastic binding elements for the machine are available in 14 colors. CIRCLE NO. 270 ON READER SERVICE CARD.

CARRIER FOR METALLIC INKS

VarMel, a carrier for metallic powders, which can be used with all types of metal, plastic and rubber plates, has been announced by Central Compounding Co. According to the company, metallic inks made with VarMel require no sizing or base coat to produce an opaque metal finish on uncoated as well as enamel stock. It is claimed VarMel base inks have been run at speeds of over 5000 i.p.h. on two and five-color presses in combination with regular inks with no drying difficulties. CIRCLE NO. 269 ON READER SERVICE CARD.

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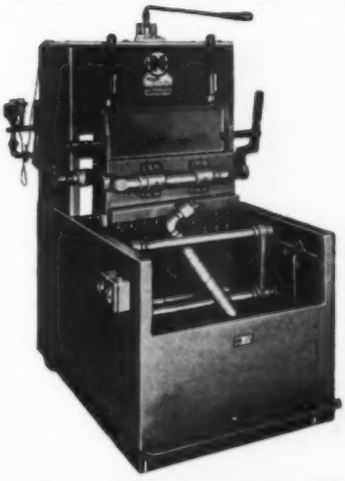

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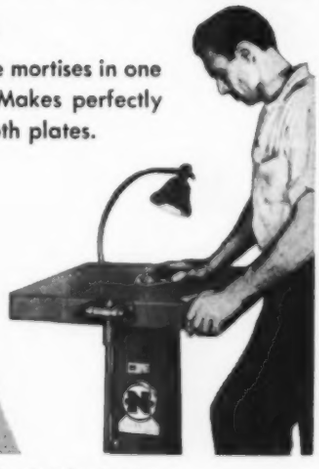

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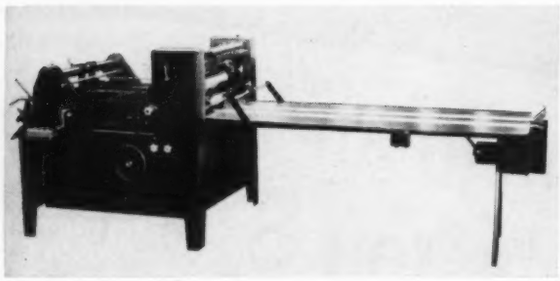


The Jet press Model JP-10 is designed to print stock ranging in size from 5 in. by 7½ in. to 18 in. by 22 in. from rubber letterpress plates at 15,000 impressions per hr. The press is manufactured by Halm Industries Co., Inc.

LARGER HALM JET PRESS FOR ENVELOPES, TAGS, ETC.

The Jet press Model JP-10, manufactured by Halm Industries Co., Inc., is designed for the letterpress printing of office and factory forms, envelopes, letters, labels and tags, etc. The Model JP-10 is larger than the JP-1 and utilizes the Halm patented oscillatory vacuum feed. It is capable of handling sheet stock ranging in sizes from 5 in. by 7½ in. to 18 in. by 22 in.

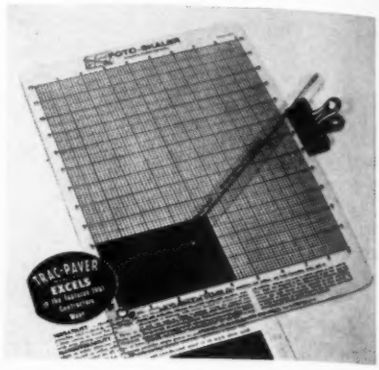
The press is said to operate at speeds in excess of 15,000 impressions per hr., using one rubber plate. Plate changes can be accomplished in 5 to 10 min. with Allen wrenches, according to the manufacturer. Stock is delivered stacked on a 6 ft. delivery table for handling after printing. Offset printing sections and special feeders are also available for the cast iron constructed press. CIRCLE NO. 254 ON READER SERVICE CARD.

NEGATIVE LAYOUT TABLE AVAILABLE IN FIVE SIZES

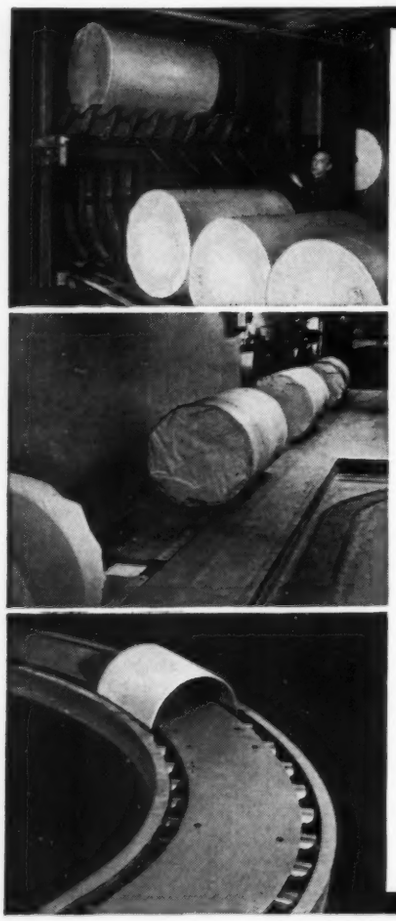
An all metal negative layout table is available in five sizes from W. A. Brown Mfg. Co. The tables are constructed of 12 ga. steel and incorporate adjustable straight edges on all four sides. A reversible diffusion glass top which is laminated for safety, and side doors for servicing of fluorescent tubes are other features of the table. A utility tray is included as standard equipment on the table. CIRCLE NO. 274 ON READER SERVICE CARD.

PICA MODEL FOTO-SKALER FOR CROPPING, REDUCING

The Foto-Skaler, a transparent scaling device for art, layouts and photos, is now available from Elizabeth Edge Studios, the manufacturer, in a pica model. The over-all size is 10 in. by 15 in., with grid area measuring 54 picas



wide by 72 picas deep in one pica increments. A swinging range finder arm facilitates setting the Foto-Skaler at any desired size. Reduction and cropping size may be determined by placing the transparent grid over the photo or art and regulating the image finder arm. CIRCLE NO. 257 ON READER SERVICE CARD.



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PRINTING INDUSTRY PATENTS

Covering patents issued Jan. 3, 10, 17, 24 and 31.

All new patents for the printing industry are reported exclusively for PRINTING PRODUCTION by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. PRINTING PRODUCTION is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

FILM COMPOSITION

The machine is intended primarily for the makeup on a film negative of lists such as directories, price lists, etc. It includes an automatic camera, a cardfed mechanism and a drive. Included is a motor for operating both the camera and the cardfeed mechanism in timed relation. No. 2,968,992, by Edward Harris Billet, assignor to Vari-Typer Corporation.

PHOTOCOMPOSITION SYSTEM

In an improved system for controlling the spacing of characters as they are recorded in preselected arrangement upon a record strip, a projecting apparatus is used. The apparatus is in combination with a device for deflecting the image through small space units. This affords a spacing control over the images projected onto the photosensitive strip independent of movement of the strip relative to the beam. No. 2,966,835 by Frederick J. Hooven and Richard C. O'Brien, assignors to Harris-Intertype Corp.

TYPE COMPOSING UNIT

The appartus is related to patent 2,876,687. It is characterized by the consecutive formation of images of the characters in a line in a common image position. This coincides with the movement of a sensitized sheet at a uniform speed in relation to said position. The

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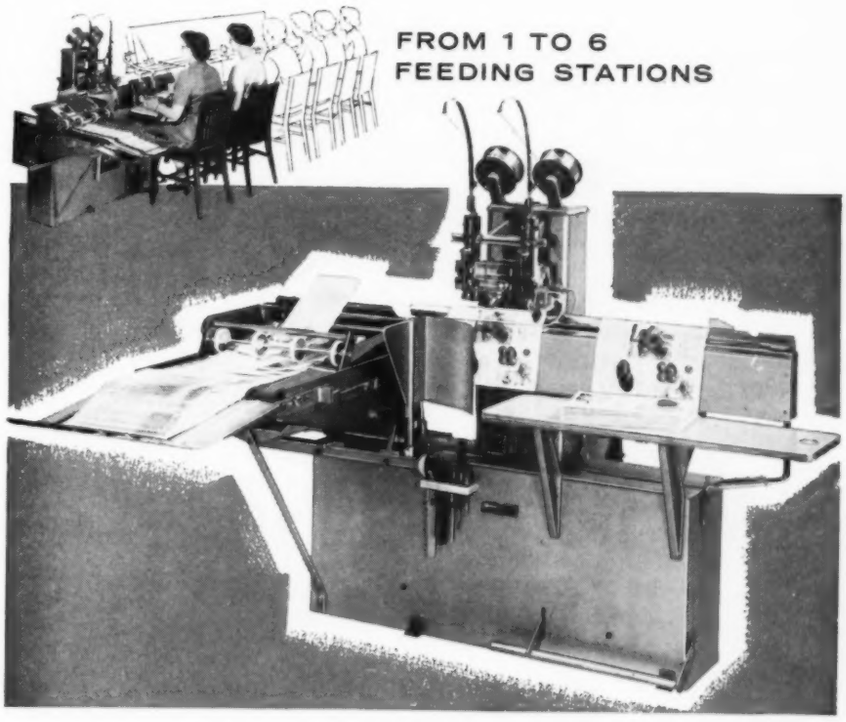

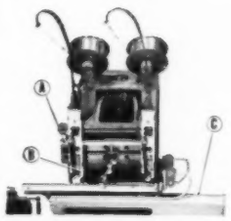

A Set Left Head on graduation of space required.

B Raise Lever to loosen Head and Lower Lever to lock Head.

C Position First Staple in Book According to Graduation.

Single Station Auto-Stitcher with Back Table gives 2 Feeding Stations • 2-Station with Back Table gives 3 Feeding Stations • Gathering Saddle adds 4 Feeding Stations to Auto-Stitcher • Single Station with Gathering Saddle gives 5 Feeding Stations • 2-Stations with Gathering Saddle gives 6 Feeding Stations • Stitches automatically staggered which allows trimming of the pile of books • From 1 to 4 Heads can be used on the Machine • When 4 Heads are used in 2-up work, the stock to be stitched should not exceed 1/16" in thickness • Speed variable at will of Operator • Maximum speed 4,100 per hour • Maximum size book 11½ x 15.

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time intervals between successive projections are made proportional to the spaces allocable to the corresponding characters. No. 2,966,836 by Rene A. Higonnet, and Louis M. Moyroud, assignors to Graphic Arts Research Foundation, Inc.

COOLING SYSTEM

The system is useful in the forming of slugs, rules and base used in printing. By this method a stream of molten metal is passed into a mold and is removed as solid metal. The system is closed so that a limited amount of cooling liquid can be used again and again. Included in the system is a novel mechanism for making inoperative various parts of the equipment dependent on the cooling system in the event of failure in the supply of cooling liquid. No. 2,967,694 by William M. Cunningham, assignor to Ludlow Typograph Company.

CARD ALIGNING DEVICE

For preparing directories, this apparatus facilitates the loading of cards to be photographed by the use of short retractable pins to position only the first few cards. The pins are retracted during the card feeding portion of the operating cycle of the machine. The cards are controlled by a slight vacuum. No. 2,969,235 by Edward Harris Billet, and Bently Raak, assignors to Vari-Typer Corporation.

PHOTOTYPE COMPOSITION

This photocomposing machine has a keyboard and a register in which information corresponding to only a single line is stored at one time. Following the storing of a line, the information in the register is sent to the transcribing unit where it is photographed. The operation can be carried out at about the same speed as with an ordinary typewriter. No. 2,968,383 by Rene A. Higonnet and Rene A. Grea, assignors to Graphic Arts Research Foundation, Inc.

REGISTER MARKS FOR TYPE ALIGNMENT

Copy for telephone directories, timetables, catalogs, price lists, inventories, registers, etc., can be prepared by disposing text elements with suitable mutual intervals across a continuous band. The band is provided with a register mark for each text element. The position of the mark is determined in relation to the beginning of the text. The cards are subsequently cut from the band by transverse cuts, the positions of which are determined by the register marks. No. 2,969,724 by Johan Henrik Lemche, assignor to Carl Allers Etablissement A-S.

LINE TURNOVER DEVICE

The device is designed for a linecomposing machine of the type provided with a line-founding pot for the lines oscillating about a horizontal axis. It is characterized in that it comprises a thrust member rigid with a point of the founding pot for the lead for the lines and a square lever pivoted around a fixed point of the frame and adapted to engage with a nut for collecting the lines composed by the machine. No. 2,969,139 by Mario Covini, assignor to Linotype S.p.A.

Platemaking:

NEGATIVE-POSITIVE CONVERSION METHOD

The method avoids the drawbacks of photographic methods of carrying out negative-positive conversion by copying and producing successive color extractions. This is done by repeated copying until the required standard gradation course is obtained. The in-

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1. *Highest heating efficiency* . . . because the heat is applied where it belongs—*inside* the metal.
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#67 Non Felt (Top)				X			X	X
#79 E.D. (Drawsheet)		X						
#77 Draw Sheet	X	X						
#76 Cork (Unders)			X	X	X	X	X	X
#62A (Synthetic Unders)			X	X	X	X	X	
#63A Foundation			X	X	X	X	X	
Other Thicknesses on Special Orders								

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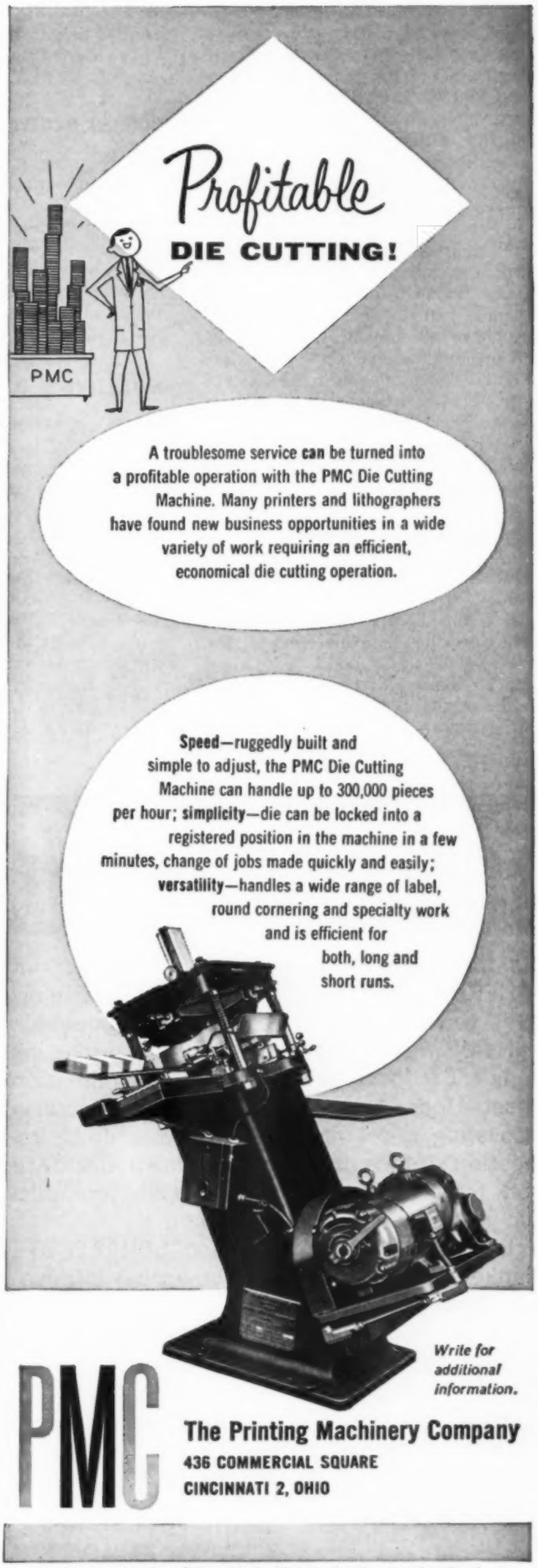

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vention provides an electronic system which employs a gray scale positive photographed together with the copy by the use of the same color filters. No. 2,969,709 by Frtiz-Otto Zeyen and Karl-August Springstein, assignors to Dr. Ing. Rudolf Hell Kommanditgesellschaft.

LETTER SPACING MEANS

The characters are useful for preparing display posters or copy for use in the preparation of photoengraved or lithographic plates. The characters are printed or silk-screened onto transparent sheeting material, such as cellulose acetate. They are easily separated and applied in a balanced, eye-pleasing composition onto copy by means of the spacing aid included. No. 2,970,043 by Robert F. Serafin, assignor to Artype, Incorporated.

EXPANDING BASE PLATE

For mounting and backing without deforming plastic or Nylon printing plates, this base plate in its several forms provides basically two sections. The sections are formed so as to interfit in an adjustable manner and accommodate different sizes of plates. Both surfaces are rigid and provide means for attaching the completed units to a printing press. No. 2,966,848 by Harry W. Faeber, assignor to Time, Incorporated.

RUBBER PLATEMAKING

Rubber printing plates for printing cards and stationery can be prepared on this device which can be heated by electricity or gas. The device is adapted to receive a sheet of preformed or precut rubber on a flat heated surface after which a matrix is placed on the sheet and pressure is manually applied. No. 2,968,063 by Ralph F. Derby, Sr.

NEGATIVE WORK TABLE

For lining, ruling, and scoring negatives, this table is designed for positioning a translucent work surface in any one of a number of vertically related positions. In one of the positions, it is locked in any one of four positions at right angles to each other. In another position it may be rotated freely. In a third position it may be locked in any one of 360 positions spaced by 1 in. increments throughout 360 deg. of angular movement. No. 2,968,115 by Woodruff Randolph, Clair N. Brewer, and Charles O. Goss, assignors to Intl. Typographical Union of N. America.

MAT MOLDER-SLITTER

This apparatus is designed to enable the method of patent 2,861,334 to be carried out more expeditiously. It dispenses with the step which requires the matrix to be first accurately positioned in a special slitter. The slitting of the sides of the matrix can be done simultaneously with the initial making or molding of the matrix. No. 2,966,847 by Craig C. Baker, Vernon R. Spitaleri and Samuel Oderman, assignors to Sta-Hi Corporation.

METHOD OF EMBOSSING

The method for producing engraving is accomplished photolithographically from a representation of the actual depressed markings on an engraved plate or block. The embossing step is done separately using the plate or block. This engraving method is said to be faster and more economical than the usual method, especially where multicolored engraving is done. No. 2,969,728 by Ray Horn.

STENCIL MAKING MEANS

The stencils are of the type which are prepared by uniformly coating a thin flexible sheet of permeable material with a film of a cinnamic acid ester

BETTER COLOR PRODUCTION

It's true. The tough glass-smooth surface of SPHEREKOTE Blankets and Drawsheets actually gives you crisper and cleaner ROP production.

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Photomechanics and Printing

By J. S. Mertle and Gordon L. Monsen

Two authorities have pooled their knowledge in producing a technical book to cover every phase of platemaking and presswork in Graphic Arts reproduction processes.

Valuable source of information for all printing plant and production managers, superintendents and departmental foremen.

Covered are photomechanical platemaking and printing processes for photoengraving, offset, gravure and silk screen, as well as a history of papermaking.

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PRINTING PRODUCTION

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resin sensitized to the action of light. A feature of the inventions is the use of an impervious layer which is thicker than those usually used and more wear resistant and more impervious to liquids. Nos. 2,969,731 and 2,969,732 by Fred E. Kendall.

Feeding, Folding, Delivery:

NEWSPAPER FOLDER

Newspapers are folded into small, individual and compact packages for door to door delivery by newsboys. The machine is adapted for use with presently used tying machines and receives newspapers from a stack or hopper. No. 2,969,232 by Henry W. Cook.

WEB FEEDING CONTROL

This feeder is for use in presses in which successive identical printed impressions are made on parallel-sided webs of papers having longitudinal series of perforations on each edge. A continuously rotatable pressure roller adapted to press a paper web against the printing roller is used. A pin wheel drive draws the printed web away from the printing roller by engaging the marginal holes. No. 2,967,479 by Herbert Edward George and Albert Edward Coupland, assignors to George & Miller, Ltd.

"All right, I'm getting a *big deal* . . . But what the devil is it?"

SHEET FEEDER

The feeder is of the type in which sheets are fed in a stream or sheet by sheet from a pile through a pair of pull-in rolls onto a feed board. Wrinkling and misfeeds are obviated by tensioning each sheet between the forwarding suckers. A pair of sheet lifters outwardly of the sheet forwarders and causes them to rise to a level above that of the sheet forwarders while latter are at the rearmost point of their forward travel. No. 2,967,705 by Robert E. Lindemann, assignor to Harris-Intertype Corporation.

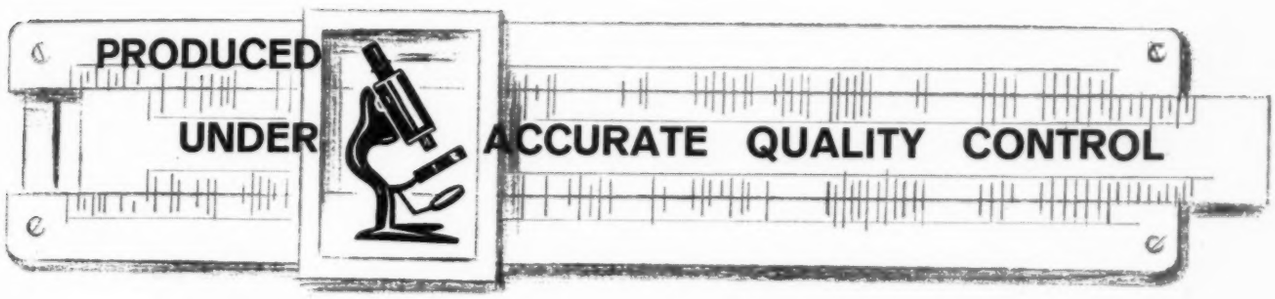
SHEET SLOWDOWN DEVICE

Sheets being released from high speed printing presses can be slowed down without an auxiliary mechanism. This is accomplished by the use of a novel drive mechanism for the hollow perforated cylinder over which sheets are delivered. The drive is adapted to rotate the cylinder at a reduced speed with respect to a conveyor so that air through perforations is intermittently reversed to retard each sheet upon its release by the grippers. No. 2,969,980 by Carlton C. Claybourn, assignor to Miehle-Goss-Dexter, Inc.

TOP SHEET FEEDER

This invention features, in one form, an apparatus for feeding sheets from a pile. The apparatus includes new and remnant pile hoists. It is so constructed and arranged that as the pallet is withdrawn, a pile supporting member mounted on the secondary elevating means moves into a pile supporting po-

BEVERIDGE MATS



In making all Beveridge Mats, rigid quality control starts with raw materials and is carried through the complete manufacturing process. For the newspaper field results of such control are plainly evident in one-piece BEVERIDGE AUTO-PAK packless mats, BEVERIDGE HI-SPEED and BEVERIDGE MULTI-CAST mats. Each enables you to attain uniformly high reproductions—the utmost in mat satisfaction.

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sition under the front edge. This action prevents the dropping of the front edge of the remnant pile onto the new pile. This maintains the front edge of the remnant pile at a height which permits feeding the top sheets therefrom. No. 2,968,481 by Norman W. Taylor, assignor to Harris-Intertype Corp.

SCANNER METHOD USED TO AVOID RETOUCHING

The invention aims to eliminate retouching work in the production of printing plates. The process includes the steps of sequentially scanning a colored original by a small spot of white light. A color separation photographic plate is exposed sequentially through an appropriate color filter to the light transmitted from the original as the result of the application of the scanning spot. Light transmitted from the original is used to modify the intensity of the scanning spot to compensate for color, or color and tone imperfections, of the reproducing process and developing the plates. No. 2,968,-214 by Arthur Roy Kilminster, assignor to Hunter-Penrose, Ltd.

VACUUM DELIVERY BELT

Thin flexible sheets of paper or signatures of newsprint and the like may be picked up and conveyed to a desired location and then released by this belt. A feature is the use of separate, successively arranged chambers. After a vacuum has been drawn the chambers will maintain the vacuum until the vacuum is released at a predetermined delivery point in the belt travel. No. 2,969,869 by Karl A. Klingler.

CONTINUOUS REWINDER

The rewinder is of the type in which a web supplied on the completion of one roll is cut from the oncoming web by a diagonal cut. This greatly simplifies the attachment of the severed web to a new mandrel or its core. It also simplifies construction of the machine. It includes a stock or web material tensioning mechanism that immediately precedes the rewinder and acts to control parts of the rewinder where such tensioning mechanism does not form a part of other material supply means. No. 2,969,930 by Peter Zernov, assignor to Mercury Engineering Corp.

Printing Presses:

COLOR PRINTING

The invention is concerned with monitoring and control apparatus so as to enable smaller changes to be detected than those seen by the eye and to indicate when a change of quality of the color reproduction is starting to take place. It also provides quantitative information so that correction can be made either manually or automatically by appropriately adjusting the quality of the ink before it is applied to the printing cylinders. No. 2,969,016 by John Fothergill Crosfield, Kenneth Bradley Morris and Gordon Stanley James Allen, assignors to J. F. Crosfield, Limited.

INK CHANGE INDICATOR

The apparatus includes translating mechanism for traversing a photoelectric scanning head across a moving printed surface. Movement is transversely to the direction of movement of the latter. The scanning head is enabled to scan monitoring areas in the form of a number of patches of the ink spaced at selected points across the width of the printed surface. An indicator responsive to the output of the scanning head provides an indication of the quality of reproduction of that color at the selected points. No. 2,968,-988 by John Fothergill Crosfield, assignor to J. F. Crosfield, Ltd.

PRINTING AND PUNCHING

The invention is designed for printing multiple section ticket blanks which include a short header section, of less than the full length of a full-length sec-

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For More Information Circle 69 on Reader Service Card

tion of the ticket. It also includes a printing and punching machine adapted to accommodate multiple section blanks which have such short header sections and which have various numbers, one or more, of full length sections. No. 2,968,236 by Alan M. Swett, assignor to Dennison Mfg. Co.

DAMPENING COVERS

For use in lithography, this invention provides coverings for dampening rollers precut to size and having pressure sensitive adhesive for securement of the covering to the roll. In addition, a moisture barrier is provided between the moisture carrying pile fabric and the roller itself. No. 2,966,723 by Morris C. Swope, assignor to Perfex Corporation.

Binding, Cutting, Perforating:

BOOK CASE STRIP FEED

A piston is energized periodically by an electric eye control to rotate an eccentric through a small angle. The eccentric is connected to a clamp reciprocating mechanism by a crank arm mounted on the eccentric. When the eccentric is rotated the length of stroke of the crank arm is varied. Also varied is the distance through which a case strip is fed forward by a single reciprocating stroke. No. 2,968,430 by Kenneth Payne Martin, and Walter Paul Rowland, assignors to the Colonial Press, Incorporated.

PATENT SEARCHES

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, write

INVENTION, INC.
Munsey Bldg., Washington, D.C.

PRESSING AND FORMING BOOK HINGE JOINTS

The machine is small and compact enough to be readily moved into the operation of a small bindery. The machine is so organized that a single operator may feed books into the machine. The machine controls operation of case pressing and joint forming irons, and permits the books which have passed through the machine to move onto a conveyor, or to be stacked by hand. No. 2,969,554 by John O. McCahon, assignor to R. R. Donnelley & Sons Co.

HEAT-SETTING ADHESIVE

In this method, sheets are assembled after each sheet has been coated at one edge with an adhesive. A backing is then applied and the adhesive film on the book is subjected to rapidly oscillating dielectric heating. This results in setting the adhesive to a film which is as strong as and as flexible as the paper itself. A polymeric resin including polyvinyl acetate may be used as the adhesive. No. 2,968,336 by Kenneth Payne Martin, and Richard J. Nadaskay, said Martin assignor to The Colonial Press, Inc., and said Nadaskay, assignor to National Starch Products, Inc.

PAPER CLAMP CONTROL

A hydraulic pressure system includes a four way valve under manual control. Pressure operated valves are utilized to determine maximum pressures utilized in raising and lowering the automatic clamps of paper cutting machines. A mechanical linkage system comprising a foot treadle is used to control the four way valve and to coact with cutting knife operator to maintain the paper pile clamped regardless of the knife position. No. 2,966,889 by Carl Thumim, assignor, by mesne assignments, to Miehle-Goss-Dexter, Inc.

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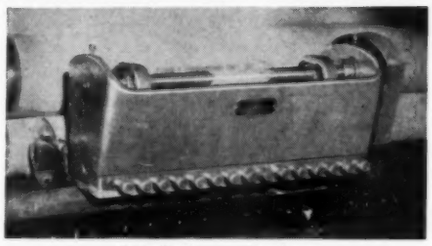

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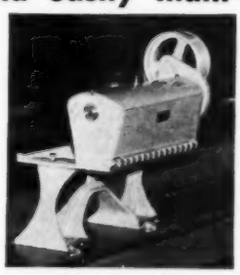

Installation on late model Goss Headliner

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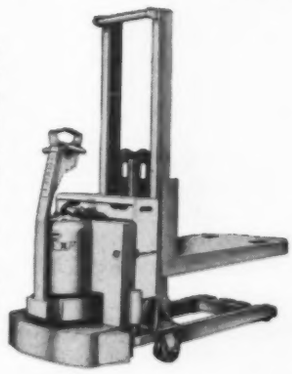

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Books for Printers

(CONTINUED FROM PAGE 22)

character counts of various sizes of type up to 33 picas in line length. Complete instructions for using the gauge in connection with the manual appear on the inside front cover of the manual. The gauge is contained in a handy pocket on the inside back cover of the manual.

Also included in the copyfitting manual are computation tables for quick calculation of total characters in a body of copy up to 25 lines deep by 70 characters per line long.

A handbook also accompanies the copyfitting manual. This handbook contains 280 alphabet showings of currently popular Linotype and Intertype faces in all available sizes up to 18 pt. Next to each alphabet is indicated the Streamlined Copyfitting gauge scale to be used when casting copy, for lowercase, caps and small caps. In several instances, Monotype sizes and scalings are also noted.

The manual size is 6¾ in. by 9½ in.; handbook size is 6 in. by 9 in. The combined editions are priced at $8.50. For further details write: Arthur B. Lee, 22 W. 45th St., New York 36.

What the Lithographer Should Know About Ink

Lithographic Technical Foundation has published *What the Lithographer Should Know About Ink*, a book designed to provide the lithographer with information about ink that is essential in his work.

This paperbound manual on lithographic ink contains 10 subdivided chapters supplemented by 96 illustrations which describe many types of litho inks, including the latest heat-set, gloss and metallic inks, in detail.

A study of the characteristics and requirements of litho inks and a review of the available vehicles, pigments and driers are also included in the book.

The LTF publication contains full chapters on printability and quality, handling ink in the pressroom and a comprehensive checklist of ink troubles. The list includes the probable causes and corrective measures for a variety of troubles.

Recommended for apprentice and experienced alike, the lithographic ink manual contains a glossary which explains technical terms used in the book's contents. Information on the evaluation of process inks and hints on methods of testing inks for application before a press run are also included.

What the Lithographer Should Know About Ink may be purchased for $5, plus shipping and handling charges, from Lithographic Technical Foundation, 131 E. 39th St., New York 16.

Printing Trades Blue Book

The 1961 *Printing Trades Blue Book* for Metropolitan New York is now available with the latest corrections. The directory includes listings of over 6600 operating Graphic Arts plants and suppliers in New York City, its suburbs and New Jersey.

The listings include company name, year established, address, telephone number, names of officers and principals, name of buyer and lines of business. Individual cross-reference listings for about 20,000 executives in New York City firms are consolidated in the personnel directory section of the book.

Copies may be obtained from A. F. Lewis & Co., 853 Broadway, New York 3. The cost is $20 plus postage and, if in New York City, 3% sales tax.

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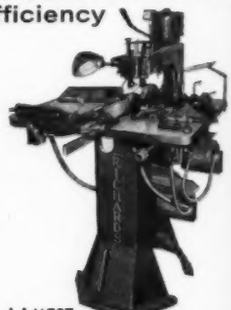

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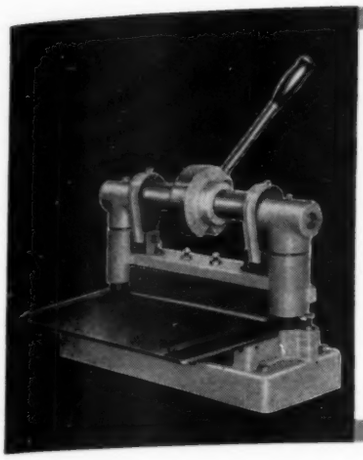

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Helpful Literature

(CONTINUED FROM PAGE 42)

ELECTRIC COUNTING SYSTEM

A catalog sheet dealing with the electric counting system developed by General Controls Co. is available on request and is entitled *Automatic Counting of Folded Signatures*. The system is designed for mounting on all types of folding machines. Its purpose is to count folded signatures from any fold plate or from stacker bars. CIRCLE No. 326 ON READER SERVICE CARD.

BUSINESS FORMS JOGGER

Syntron Company has announced the availability of a catalog section featuring two, three and four bin business forms joggers. The joggers are used for aligning checks, punch cards, account cards, etc. CIRCLE No. 327 ON READER SERVICE CARD.

VISUAL CONTROL SYSTEM

Simplified visual control and scheduling is the subject of a twelve page booklet released by Memo Flex Div. The Memo Flex visual control board, a one piece construction of white vinyl laminated steel, and its accessories, prices and specifications are described in the booklet. CIRCLE No. 309 ON READER SERVICE CARD.

GARMENT SAFETY RULES

The National Safety Council, in cooperation with the Institute of Industrial Launderers, has issued a leaflet in which "the seven deadly sins of work garments" are outlined. Safety precautions in machinery areas, typical accidents caused by unsafe work clothing, and other garment safety factors are discussed in the leaflet. CIRCLE No. 313 ON READER SERVICE CARD.

WESTVACO PAPER PORTFOLIO

A full-color portfolio covering suggested uses for the full line of West Virginia printing papers is available with samples of all grades of stock from West Virginia Pulp and Paper Co. CIRCLE No. 306 ON READER SERVICE CARD.

DATA ON REEVES MOTODRIVES

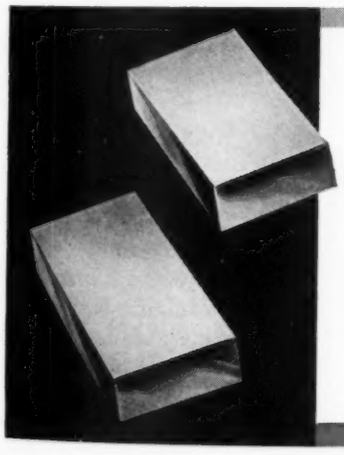
Information on output speeds, full rating tables, dimensional diagrams and charts for over 100 different assemblies are included in a new 88 page publication covering Reeves Vari-Speed Motodrives. The Motodrive is a self-contained variable speed drive unit. The catalog is available from Reliance Electric and Engineering Co. CIRCLE No. 322 ON READER SERVICE CARD.

AMERICAN THOUGHT STARTERS

Eagle-A Thought Starters, No. 2 of a series, is an idea specimen portfolio showing many possible uses of Eagle-A L'Aiglon text and cover weight stock which has recently been released by American Writing Paper Corp. Featured in the portfolio are 10 original design pieces which show several treatments of feathery, deckle edges. CIRCLE No. 316 ON READER SERVICE CARD.

POWER CONTROL CENTERS

Bulletin GET-3041, a 16 page publication in which detailed application data of grouped power control panels is given, has been made available by General Electric Co. Specifications on squirrel cage, synchronous-motor, wound-rotor-motor and d.c. motor combination starters and line breakers are given. CIRCLE No. 317 ON READER SERVICE CARD.



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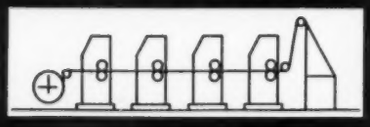

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Wipe-On Litho Plates

(CONTINUED FROM PAGE 50)

the entire plate with adequate pressure applied.

The development is continued for about a minute until the lithographic image is a dense black. Then the plate is rinsed with water by sponging lightly. Excess water from the plate is removed, and it is gummed with gum etch solution. The gum etch is applied with a clean sponge used only for gumming. It is then wiped down smooth and dry with a clean, soft cloth. The plate is now ready for the press.

Late Plate Developments

In addition to the wipe-on aluminum plates mentioned in this article, there are two more types. One is the newly introduced zinc wipe-on plate. The other is a black iron base plate. The zinc plate is the outcome of a research project by the Lithographic Technical Foundation and sponsored by the American Zinc Institute, American Products Co., Illinois Zinc Co., and Matthiessen and Hegeler Zinc Co.

A new tub graining procedure has been developed for these plates. A feature of the graining procedure is a corrosion protective film applied to the metal automatically during the time the zinc is in the graining tub. The grain produced is as fine or even finer than the commercial brush grains. The plates are diazo coated and processed like the aluminum plates which use one step ink developer solution.

Up to 100,000 Impressions

According to LTF, these zinc wipe-on plates produce finest quality impressions up to 100,000. Plates can be regrained and re-used time after time. Tests so far show that they are as trouble free and dependable as any other good surface plates.

The coating solution and the special ink developer for zinc wipe-on plates are available at present in a free sample kit from the American Zinc Institute, 292 Madison Ave., New York 17, N.Y.

The iron base plate is a ceramic enamel coated plate. The plate is fired and chemically etched to prepare it for the diazo sensitizing coating. It is processed in the same manner as the wipe-on aluminum plate. The iron base plate is marketed under the trade name of Ceramograph by American Graded Sand Co.

Research men and organizations are eager to improve the present wipe-on plate technique. Experimental work is being done with a positive working wipe-on plate. An aluminum foil paper laminate is also being field tested. Manufacturers are busy developing a lacquer suitable for the conventional method of finishing. To date a fully successful lacquer has not been developed. This new lacquer will replace the one step lacquer developer method of finishing and will add greater flexibility to the system.

Finally, LTF is engaged in evaluating a new zinc-copper-titanium alloy plate. It is hoped it will extend the use of wipe-on zinc plates for the longest runs without creeping or stretching on presses.

Electrofax Process

(CONTINUED FROM PAGE 55)

tic. Or, once an image has been fused, the paper may be recharged and other images overlaid.

The paper is not subject to accidental exposure during storage. It is charged just prior to use, and all the materials are nontoxic and noncorrosive. A resolution of 300 TV lines per in. with normal machine development and up to 1000 TV lines per in. with hand processing is obtainable. Excellent reproduction of multi-tonal copy may be obtained with Electrofax by using a 150 line halftone screen. Screening, however reduces the resolution in the photograph and, for this reason, is not widely acceptable.

Map and Platemaking

The overprinting characteristics of Electrofax have made possible the design of an electrostatic color map printer. This machine produces maps from miniature film separations, and since maps are primarily line copy with a limited gray scale, this is almost an optimum application for Electrofax.

The color map printer was built under a contract from the U. S. Army Engineer Research and De-

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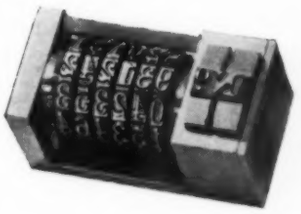
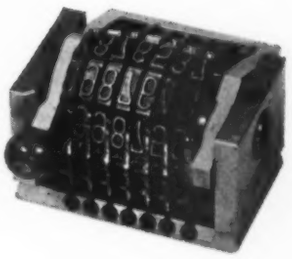


New! You use fingers only to take apart this simplified Roberts Royal type-high unit for cleaning, or replacing skip wheels.

This Roberts high-speed rotary flat base unit with convex head features a replaceable ball and pin. Also available is a straight head unit with reversible operating arm. Both in three standard bases.



Write or call Roberts Numbering Machine Division, Heller Roberts Manufacturing Corporation, 700 Jamaica Avenue, Brooklyn 8, N. Y. Telephone Midway 7-4600.

For More Information Circle 91 on Reader Service Card

velopment Laboratories, Fort Belvoir, Va., as an alternative to large scale transport and storage of maps.

The electrostatic printer allows the rapid reproduction of maps in the field on specific demand. It prints 22½ in. by 29 in. maps in five color separation by electronic flash. The paper moves continuously through the machine at rates as high as 16 in. per sec.

The map printer uses liquid Electrofax development techniques in which the developing pigments are suspended in an insulating fluid. This fluid is applied to the exposed paper surface by a simple roller technique. This development technique has been found to be excellent from an ease of mechanization standpoint, for its overprinting characteristics, exposure tolerance and background cleanliness.

The significant features of the Electrofax process when applied to the production of lithographic and letterpress plates are elimination of the negative film step and the reduction of exposure time, according to RCA, from four minutes to a few seconds.

With this system, any hard copy can be exposed directly by contact or projection onto a metal plate. The electrostatic image is then toned and fused. The Electrofax coating in the non-image areas is removed with a solvent, and the plate is ready for the application of any of the conventional etching techniques.

Experimentation with Electrofax as a basic tool for synchronous data copying operations with computers and communication systems has been successfully carried out. Facsimile printing at rates in excess of 20,000 characters per second has been achieved.

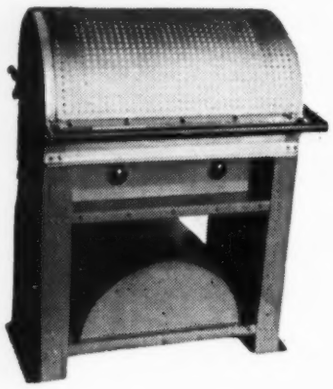
". . . so I gave 'er a quoin for the meter."

Transparencies of high resolution and brightness are also obtainable by the Electrofax process for projection of display material of any kind onto very large screens.

Through Electrofax, an optical technique has been developed which makes possible the coated printing of signatures into bank books or credit cards.

As a general copying medium, Electrofax characteristics are also very suitable. One example is the library copier developed by RCA. This machine optically copies pages from books onto Electrofax paper using reflective illumination.

In the near future, there is the prospect of increased capability for the Electrofax medium. Increased sensitivity, greater tonal range, increased fidelity of color reproduction, lower cost materials and transparent color toners are some of the improvements hoped for by RCA. ⊕



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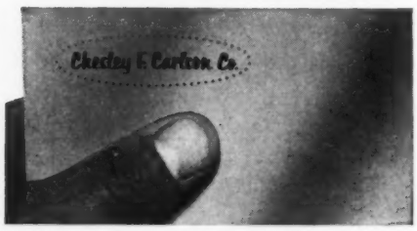

● On your really fine jobs—color process—close register—use Carlson mask. Thin vinyl for better contact. No pin holes. Ten 16″ x 20″ sheets ($1.40 value) sent free with purchase of one Carlson Register Pin.

Carlson Register Pins

Stainless steel. Pin polished to exactly .250″. Smooth thin base. Will not break. Ample thumb space. Finest obtainable.

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Gentlemen: Enclosed is $1.35 for one Carlson Register Pin. I understand you will send free of charge ten 16″x20″ sheets of Carlson Vinyl mask.

NAME_____

ADDRESS_____

CITY_____

STATE_____

Circle 34 on Reader Service Card

Label Printer

(CONTINUED FROM PAGE 59)

by roll. As the active roll is depleted, the standby roll is automatically spliced to the active web. The turret assembly mounting is rotated slowly to bring the standby roll into feed position, and operation is continuous. A new roll must be loaded and threaded about every 30 min. Each roll has enough paper for about 85,000 address labels.

Buffer Unit is Custom Built

The design of the buffer and control unit depends upon the requirements of the addressing system and computer to be used. At *Time*, the unit operates from a magnetic tape prepared by a computer. Each tape reel holds from 70,000 to 90,000 different blocks of subscriber data. Automatic switching from one tape reel to another assures uninterrupted operation.

The buffer and control unit has logic and control circuits for organizing information and sequencing its flow to the printer. There is enough buffer storage capacity for live records so that up to 84 dead records can be rejected without producing a blank label. A 144 character circulating buffer permits repetitive printing of the city-zone-state line, eliminating the repetition of this information for each subscriber on the tape.

Over-all dimensions of the printing unit are: Length, 192 in.; width, 32 in.; height, 69 in.; and floor space, 44 sq. ft. Weight is 4230 lbs. The printing unit should be vented with suitable ducting, and air conditioning is recommended for operation.

Many other printing uses for the principle of the Videograph label printer are being considered by A. B. Dick Co.

A high speed copy reproduction system is under development for the U.S. Navy; a remote electrostatic camera-printer system that produces an instantaneous photographic record of moving objects has been demonstrated; and a high

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Circle 154 on Reader Service Card

speed digital plotter/printer system for plotting curves and graphs and producing page print from computers is under design. ⊕

Robot-Like Imprinter

(CONTINUED FROM PAGE 51)

changes required for a dealer or number of dealers. Another governing production factor is the thickness or bulk of the catalog to be imprinted and/or labeled. A catalog ¼ in. thick could be processed at higher speed than one of ¾ in. thickness.

Imprinting Operation

As the machine is operated, bulk copies of the catalog for the first dealer on the list are imprinted as they pass flatwise through the machine. These are catalogs which will not be mailed. During this imprinting operation the labeling head is inactive because mailing labels are not required.

Imprinting is done from a small molded rubber plate segment. The segment is mounted on a 12 in. wide by 12½ in. long flexible copper-coated steel base plate. The steel base plate and rubber segment flex readily to conform to curvature of transfer and impression cylinders.

The plates are stacked on a platform in proper sequence with rubber plate segments down to coincide with the labeling lists.

In operation, the imprinting plate is picked up by the transfer cylinder. Next, at the bottom of the cylinder stroke, the plate is transferred to the printing cylinder by magnets which attract and hold the steel base of the plate. Now the printing cylinder causes the plate to contact the form roller which applies ink to the plate's rubber printing surface. As the printing cylinder continues its cycle, the inked rubber surface of the plate rolls the imprint onto the catalog.

After the imprinting operation, each plate is deposited automatically in a receptacle at the rear of the plate-holding platform.

The imprinting plates which have been stacked on a platform above the machine carry four slots. By means of these slots the predetermined number of catalogs to be imprinted is electronically communicated to an electric counter. At the same time the labeling head is disengaged from feeding labels. In this way the machine imprints the bulk copies the particular dealer needs.

Simultaneous Operation

After the bulk imprinting count is finished, the counter signals the labeling head, which then begins to apply labels simultaneously while the machine is also imprinting. Labels and imprints continue to be applied until a coding mark on the label strip signals a new dealer list. This signal automatically causes the labeling head to disengage and a new imprint plate to be placed in position.

Electronic impulses generated by the slots on the new imprint plate then signal the predetermined number of bulk copies to be imprinted, and the cycle begins over again. ⊕

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FAST-FLO PUMP

Transport your liquids or semi-liquids to point of use with a Graco Fast-Flo Pump . . . *and show tremendous savings by cutting unnecessary plant traffic.*

Air powered, the Fast-Flo doesn't require expensive electrical wiring. Fits all standard drums.

Some plants handle up to 25 different materials this economical Graco way.

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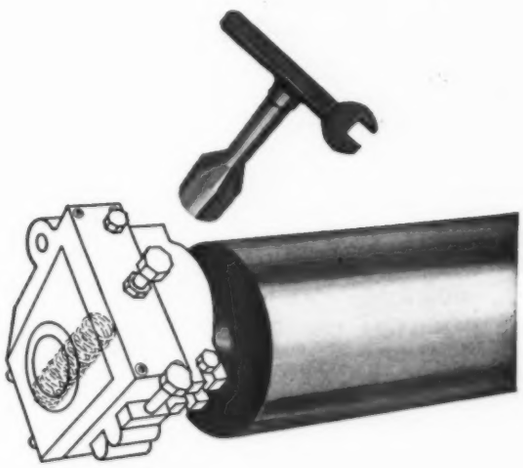
GRACO
ENGINEERS & MANUFACTURERS

GRAY COMPANY, INC.
436 Graco Square
Minneapolis 13, Minnesota

See Phone Book Yellow Pages "Spraying" for Graco Suppliers

For More Information Circle 76 on Reader Service Card



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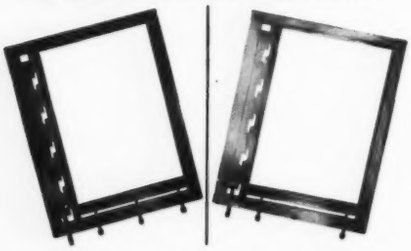

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MELBURN O. SIMMONS, Mid-West Advertising Manager, 333 North Michigan Ave., Chicago 1, Ill. Phone: DEarborn 2-6467.

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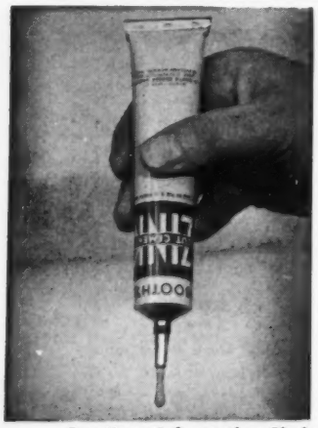

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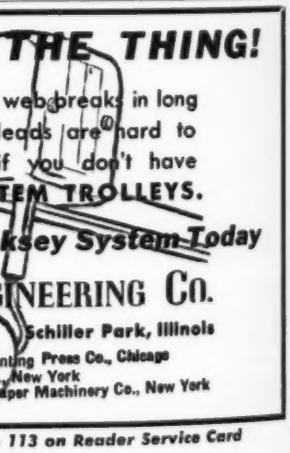

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B. A. Liberal Arts, B. S. Prnt. Management. 10 yrs. experience graphic arts. 4 yrs. adv. prod. 4 yrs. print. devel. engineer. 2 yrs. plant mgr. Interested in plant mgt. Write Box 620, PRINTING PRODUCTION

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Interested in starting ROTARY production of SNAP-OUT FORMS? I will help set up and supervise department. Eight years experience. West Coast location preferred; any location accepted for right opportunity. Write Box 619, PRINTING PRODUCTION

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PRECISION
Flat-Ground TURTLE

Mirror-smooth, extra thick top, 24" x 28½", is heavily ribbed to maintain accuracy. Adjusts from 36½" to 39½" working height. 5" x 1½" double ball bearing swivel type composition casters. Heavy-duty, rugged construction assures years of trouble-free service.

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Unsurpassed for quality and precision. Bench, console, floor models. Priced $650.00 to $995.00.

Tables glide effortlessly on 18 steel ball bearings.

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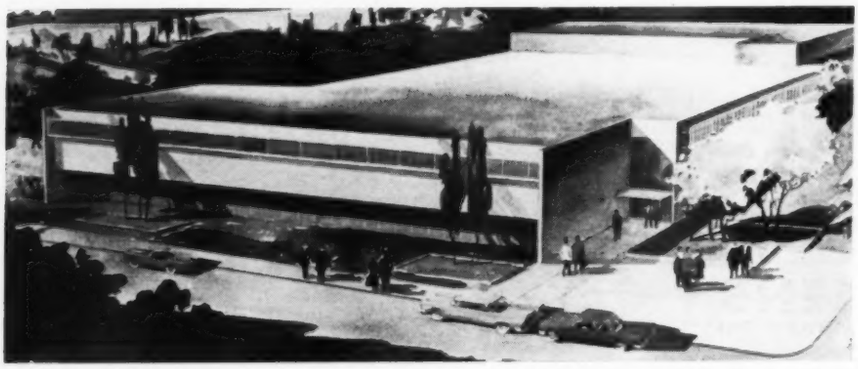
Poland to View Didde-Glaser Collator – The Gather-All collator and stitcher chosen for operation at the 30th International Trade Fair, Poznan, Poland, June 11-25, is shown to George C. Ashworth (center) of the U.S. Department of Commerce. Displaying the unit are Carl Didde (left) and Donald Glaser, president and vice president of Didde-Glaser, Inc.

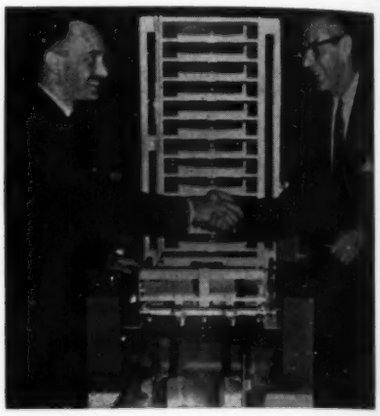
Linotype in Ceylon—A visitor at the Graphic Arts section of the U. S. Trade Exhibition in Colombo, Ceylon, watches the Model 32 Blue Streak Linotype machine intently as the operator sets Sinhalese, Tamil and English composition.

GRAPHIC VIEWS

of the Printing Industry



Cal Poly Builds New Graphic Arts Building—Shown is the architect's sketch of the new Graphic Arts building being constructed by California State Polytechnic College, San Luis Obispo, Calif. Over 40,000 sq. ft. of the new building will be devoted to the Printing Engineering department, which will also have printing equipment valued at more than $625 thousand.



Thomas Collators in Europe—Christian P. Bourg (left), Belgian industrialist, and George W. Oliver, president of Thomas Collators, Inc., shake hands over decision to establish an overseas manufacturing and sales organization for Thomas Collators. Bourg is Administrateur Delegue of Thomas Collator Europe s.a., Brussels, Belgium.

Dexter Folder Goes to Ceylon Exhibit—Crowds of curious visitors to the Small Industries Exhibit in Colombo, Ceylon gather around a Model AS Dexter folder to watch it fold information pamphlets printed on a Miehle Vertical (background).

One of New Jersey's Top Ten—The rotogravure press manufacturing plant of Champlain Company, a single story structure occupying more than 75,000 sq. ft. located in Roseland, N.J., has been honored as one of the ten most outstanding new commercial buildings in New Jersey. The magazine *New Jersey Business* described the Champlain plant as "a harmonious blending of architecture and landscape . . ." Automatic air conditioning, acoustically suspended ceilings and a large cafeteria are among the features of the plant.

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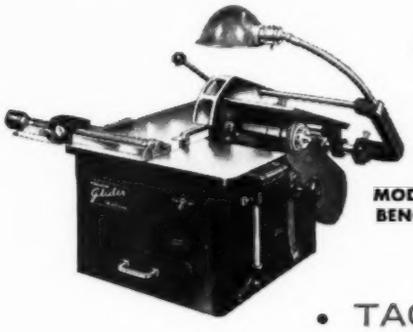
- STEREOTYPERS
- ENVELOPE MANUFACTURERS
- ENGRAVERS



MODEL BGR-78 BENCH GLIDER

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Gliders give fastest sawing with **ACCURACY—SAFETY—TROUBLE-FREE PERFORMANCE.**

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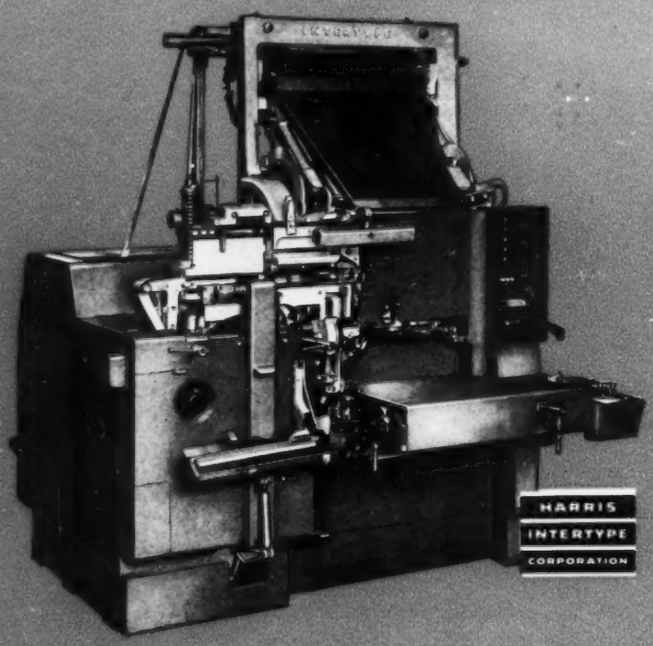
For More Information Circle 84 on Reader Service Card

Monarch for maximum output

Comparison of output—Old style high speed machine vs. new Intertype Monarch

Old style high speed machine	Monarch



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Set in Century Expanded and News Gothic

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